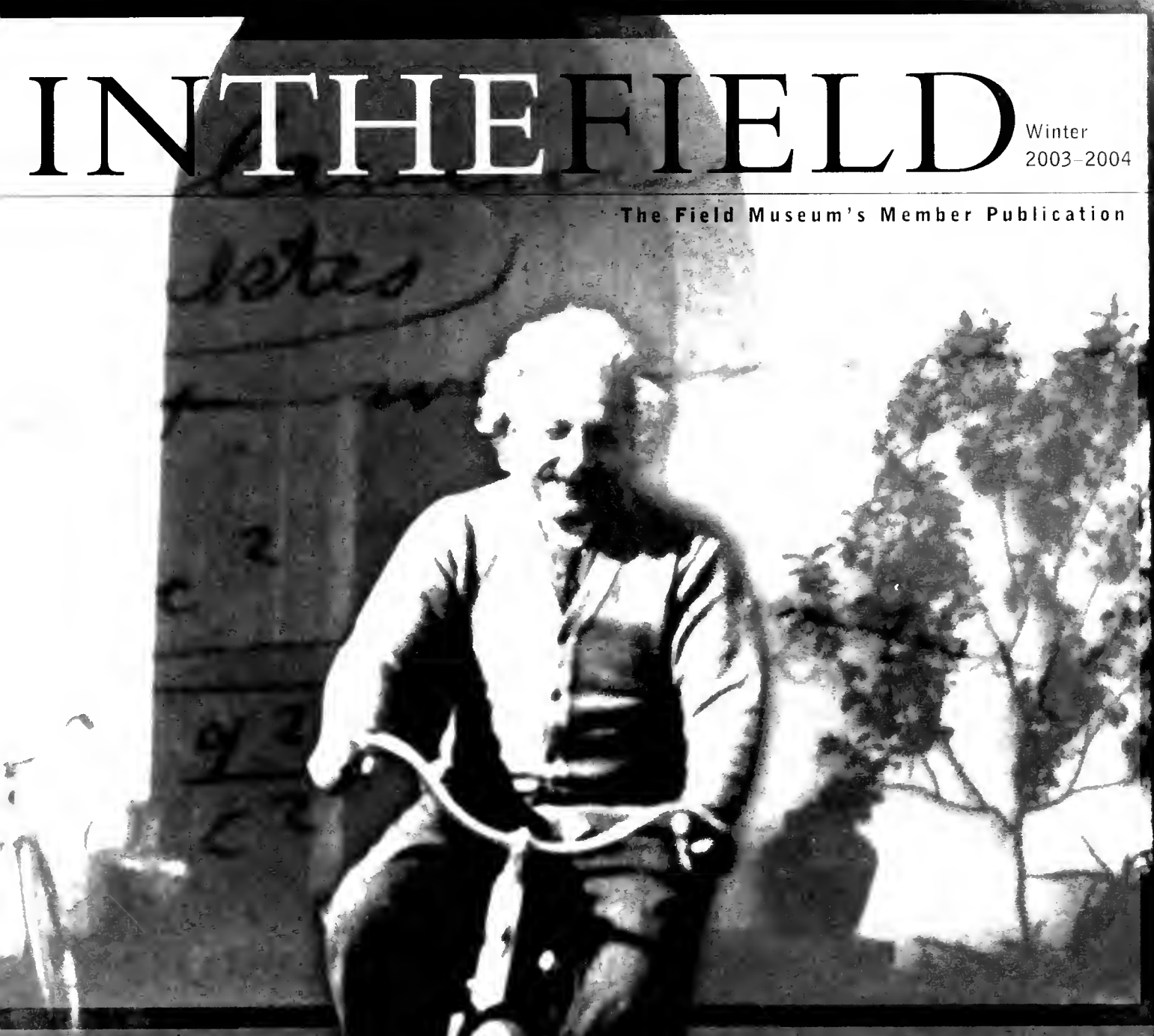
IN THE FIELD

Winter
2003–2004

The Field Museum's Member Publication



New Parking Just Steps From Museum

(See p. 19)

Einstein

The Odyssey of a Novice Naturalist

JOHN WEINSTEIN/GN88119.6

In the fall of 2002, I visited biologist Steve Goodman in Madagascar, the world's fourth largest island southeast of Africa, where he, his students and international colleagues are documenting the rare and threatened fauna and flora.

From Antananarivo, the country's capital, we traveled for 2.5 days in Land Rovers across rutted lanes with ox carts as the only other traffic. We finally reached Antsingy, "the place where no one walks." We set up our campsite and makeshift laboratory among jagged limestone peaks, and ceremoniously poured rum onto the rock to quench the thirst of the ancestors. But from then on, our purpose of collecting dictated every moment of the day and night.

Lines with bucket traps and mist nets were set up throughout the forest. For the next five days we checked the traps hourly, finding bats, frogs, chameleons, insects, snakes and other animals. At night, one dexterous, barefooted teammate leapt onto sharp limestone crags to catch amphibians and reptiles, his reflexes honed by decades of fieldwork. Most of the animals were released; some were kept for study by research institutions worldwide.

One bat specimen exemplifies the importance of collaboration and collecting with a purpose. The Field Museum and University of Antananarivo are sharing the skeleton for taxonomic and morphological studies. L'Institut Pasteur in Paris, France, is investigating disease with the blood and endoparasites (internal parasites). Cornell University is examining reproduction with the bat's sperm. The University of Michigan and the Field are researching the ectoparasites (external parasites). Yale University is conducting molecular studies with the tissues. And the Max Planck Institute in Germany is referencing its eyes to understand the evolution of sight in nocturnal and diurnal animals. Thus, one specimen can sustain the work of several far-reaching research projects.

Background: Sketches from John McCarter's journal.

Below: One bat can sustain the work of scientists around the globe.

JOHN MCCARTER

Our mission in Madagascar—and in many countries where Field Museum scientists are working—is to understand the diversity of life, preserve what is left and train young students so that they can lead research and conservation efforts in their country. At least 80 percent of Madagascar's plants and animals are found nowhere else in the world, yet slash-and-burn agriculture, overgrazing and urban sprawl are swiftly diminishing what precious few habitats remain. In a country where population explosion and extreme poverty have led to exploiting natural resources, how do we balance the needs of conservation with the needs of humans?

My trip to Madagascar sharpened my awareness of the differences between the overabundance of wealth in segments of the United States and the poverty throughout much of the world. The trip also underscored the complexity and difficulty of what Field Museum scientists are doing all over the globe. The Museum has established a framework that supports individual scientists and their research interests, but it's their own expertise, connections, determination and passion that make it all happen. Would we aspire to research biodiversity around the globe without individuals like Steve Goodman? Yes. Could we do it? No.

The Year of Biodiversity and Conservation (YBC) honors the hundreds of Field Museum scientists working in our research laboratories and around the world. In this issue of *In the Field*, and over the next three months at the Museum, you'll have opportunities to learn about island biodiversity, the Neotropics and our planet's living waters. Also visit www.fieldmuseum.org/biodiversity. You'll feel proud to be a supporter of this institution.

John McCarter

John W. McCarter, Jr.
President and CEO

See pages 4–5 for an article on Steve Goodman's research.

Support for Year of Biodiversity and Conservation programming provided by the City of Chicago, Richard M. Daley, Mayor; Department of Environment, N. Marcia Jiménez, Commissioner.

What do you think about In the Field?

For general membership inquiries, including address changes, call 312.665.7700. For questions about the magazine *In the Field*, call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Cover: See the world through the eyes of a genius in *Einstein*, running through Jan. 19. Einstein on a bicycle courtesy the Archives, California Institute of Technology. Special Relativity manuscript © the Israel Museum, Jerusalem.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

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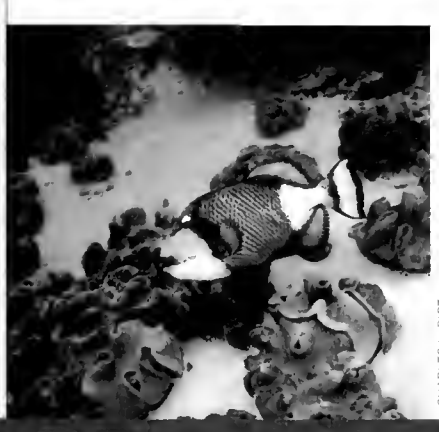
CLYDE FISHER/© AMNH

JOHN MCCARTER



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Einstein Exhibition Brings to Life the Scientist, Activist and Man

Cheryl Bordo, Project Administrator, Exhibitions

In 1919 British astronomers peered into the sky and observed the following during a solar eclipse: Light from distant stars had curved around the sun's mass—a phenomenon that physicist Albert Einstein had predicted three years before. When the astronomers released their findings, the front page of the *London Times* said, "Revolution in Science, New Theory of the Universe, Newtonian Ideas Overthrown."

The proverbial stars had aligned, and Einstein's controversial and radical theories had been proven true. Suddenly Einstein was launched onto the world stage, and his name became synonymous with "genius."

"He became as famous overnight as Madonna, plus Tiger Woods, plus President Bush, all rolled into one," explained Dr. Michael Shara, curator of *Einstein,* a new exhibition that appears at The Field Museum through Jan. 19, 2004.

Covering his groundbreaking theories, personal life and humanitarian passions, *Einstein* is the first comprehensive exhibition to explore the life and work of this famous scientist—considered one of the greatest thinkers of the 20th century. "Einstein is a real hero," Dr. Shara said. "He was one of the most intelligent, bright, imaginative human beings who ever lived, who left us a legacy which has allowed our civilization to leap forward. He was also a human being who had very deeply held principles, who cared deeply about human rights and was not afraid to speak out, even when it might cost him dearly."

Hear more from Dr. Michael Shara when you take the Curator's Audio Tour, produced by Antenna Audio. Members receive a $1 discount. See the visitor information section in the calendar for details.

The *Einstein* exhibition received excellent reviews and drew enthusiastic crowds when it opened at the American Museum of Natural History in New York, where Dr. Shara is an astrophysicist. Chicago's Field Museum is the first stop for this traveling exhibition, which will also appear in Los Angeles, Boston and Jerusalem.

Revealing that even the most complex science is a fundamentally human enterprise, the exhibition is a perfect fit for The Field Museum, where more than 200 scientists are working behind the scenes in the areas of anthropology, botany, geology and zoology. "Einstein exemplifies the passionate curiosity and drive to understand our world that all scientists share," said Robin Groesbeck, manager of exhibition coordination at The Field Museum.

Science made (relatively) easy

Einstein's theories capture the imagination because they often contradict notions about time, light, energy and space that we take for granted in our everyday lives. For example, most of us think of time as being the same for everyone, moving forward at a steady pace. Einstein's Special Theory of Relativity, however, says that time moves differently for objects that are moving at different speeds. And the faster an object is moving, the slower time passes for that object.

"As you travel close to the speed of light, your clock slows down, you actually increase in mass and you get skinnier in the direction you are traveling," said Donald Cooke, a former astrophysicist who is currently the vice president of institutional advancement at The Field Museum. "Of course, this is all relative to your perspective. If Einstein had been traveling in a spaceship close to the speed of light since his birth in 1879, he would be only one day old. Meanwhile more than 100 years have passed for the rest of us on Earth."

Many of Einstein's theories—which popular culture has explored in movies, television and books—seem like science fiction. Yet they have been proven true. And they offer important insights into how our world operates, such as why the stars shine, why black holes exist and how gravity works.

The *Einstein* exhibition uses multi-media and interactive elements to make these ideas accessible and understandable. An interactive screen shows visitors what they would look like with a black hole in their bellies. A dazzling light sculpture helps explain the speed of light. A giant wall of clocks illustrates the possibility of time travel. "This exhibition brings scientific theory into three-dimensional space, really engages people in the process, and lets them walk away with an understanding they didn't have before," Groesbeck said.

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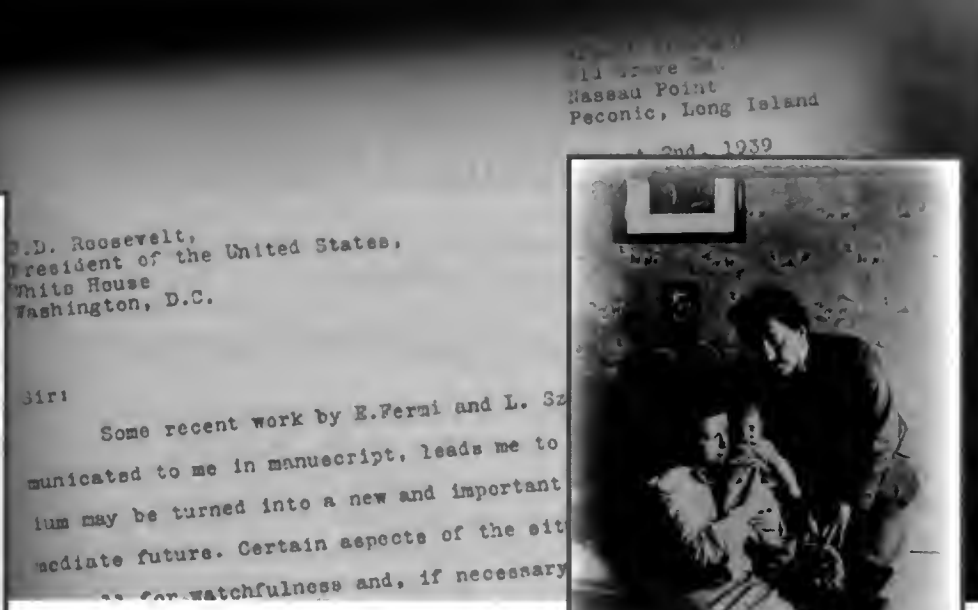

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Left: Einstein in Princeton, New Jersey, 1938.

Center: A 1939 letter from Einstein to President Roosevelt suggested that the Nazis might be building a nuclear weapon.

Right: Einstein with his first wife, Mileva Marić, and their son, Hans Albert.

Visitors can also see handwritten manuscripts from Einstein's major scientific works, including his 1916 paper on the General Theory of Relativity. "This is the most important document, not just in Einstein's life, but really in all of modern physics," Dr. Shara said.

A citizen of the world

Photographs, letters and personal mementos throughout the exhibition reveal Einstein's personal life and humanitarian pursuits. "He wasn't only a scientist making groundbreaking discoveries," Groesbeck explained. "He was also actively engaged in the political and social problems of his time. His feet were firmly planted on the ground."

Einstein considered himself a global citizen and did not hesitate to use his fame to work for the causes he believed in. He was a lifelong pacifist and socialist, who believed that only a unified world government could put an end to war. He was an internationally known activist for civil rights and nuclear disarmament, who stood up to McCarthyism and became a target of the FBI.

The exhibition features copies of Einstein's correspondence with world leaders on a variety of topics, including a 1939 letter in which Einstein alerted President Roosevelt to the fact that the Nazis might be developing an atomic bomb. Einstein did not work directly on the creation of nuclear weapons, but his name has been forever linked to them because of this letter and because his famous equation, $E=mc^2$, describes the tremendous amount of energy that nuclear weapons release.

The exhibition also includes a less well-known letter, offering Einstein the presidency of Israel in 1952. Although he graciously declined, the offer is a testimony to the deep connection Einstein had with his Jewish identity.

A normal guy

Visitors will also discover Einstein's life away from the public eye. Despite his celebrity status, Einstein, it seems, was "a normal guy," Cooke said. Einstein loved to sail and play the violin. He declined to wear socks because they would get holes in them. As he got older, he didn't like to update his glasses prescription. He also had two marriages and multiple affairs.

"I think visitors will be surprised to discover how passionate Einstein was about every aspect of life," Cooke said. "His correspondence illustrates his zeal and shows us that he was an eloquent and persuasive writer."

Einstein's letters also reveal his warmth and humor. An avid, articulate correspondent, he received dozens of letters each day, including many from children. In 1943, he responded to a 12-year-old girl with, "Do not worry about your difficulties in mathematics. I can assure you that mine are still greater."

A grand legacy

The exhibition concludes with a look at Einstein's unfulfilled quest for a "Grand Unified Theory" that would explain every phenomena in the universe, from a cosmological scale to a subatomic level. This topic remains one of the hottest areas in physics today.

"Einstein's greatest legacy is the idea that the universe is beautiful, symmetric, simple and ultimately understandable," Dr. Shara said.

By illuminating Einstein's theories, this exhibition proves yet one more of this great thinker's ideas to be true. **IF**

Organized by the American Museum of Natural History, New York; The Hebrew University of Jerusalem; and the Skirball Cultural Center, Los Angeles.

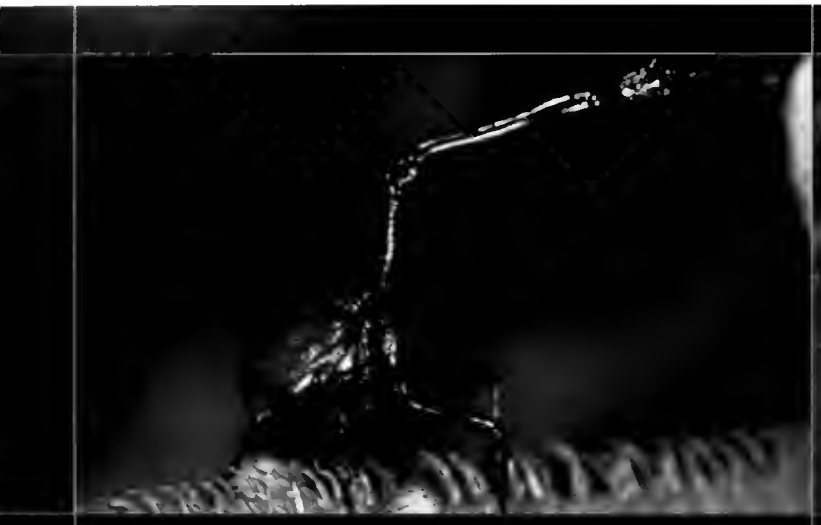
Einstein is made possible through the generous support of Jack & Susan Rudin and the Skirball Foundation, and of the Corporate Tour Sponsor TIAA-CREF.

The Natural Wonders of Madagascar

Amy E. Cranch, Editor
All photographs by Harald Schütz

Live as if your life depended on it.

I've whispered this mantra many times to remember that what I think and do really matters, not only to me but my community at large. Steve Goodman, a Field Museum biologist whose life and work are concentrated in Madagascar, also matters. His untiring, selfless efforts to document Madagascar's animals have made a lasting contribution to this internationally-deemed conservation hotspot. An upcoming photography exhibition and definitive book on the island's natural history endorse Goodman's capacity to draw attention to the country's threatened species. The island itself depends on it.



This giraffe-necked weevil is poorly known, and many more species remain to be described.

This red frog (Mantella aurantiaca) *is threatened with extinction. Its marsh home is being converted to a rice paddy, essential to the Malagasy yet destructive to the frog's habitat.*

A natural-born forest dweller

Goodman is no conformist. He fell into biology after studying birds for his sculptures, resisted pursuing his PhD for years and lived dubiously through grants wherever his research interests took him. Friends and colleagues call him the bohemian biologist. But while an appearance fit for a Grateful Dead concert may indicate his free spirit, as a scientist, Goodman is anything but laid back. Anne Yoder, a colleague at Yale University, said he has done more to investigate Madagascar's fauna than any living person.

Goodman lives in Madagascar about 10 months of the year, half of which are spent documenting animals in the forests. He recently completed his 160th inventory, recognizing that on an island with so many diverse landscapes that are changing so rapidly, one has to keep moving to know the fauna. At 6 feet 2 inches, Goodman sweeps through the tangled forests with the determination of an elephant and the grace of a gazelle. Searing heat, disease, undrinkable water and tsetse flies covering him like blankets come with the job description.

Goodman is motivated by a sense of imminent crisis as he witnesses the country's remaining habitats diminish. He himself has discovered dozens of new species, and the scientists and students he hosts on fieldtrips have added hundreds more. While it's not uncommon to exclude scientists who live in the country where the work is being done, Goodman's inclusive nature is overturning that practice in Madagascar. Between being a professor at the University of Antananarivo and coordinating a WWF-Madagascar project, the Ecological Training Program (ETP), Goodman has provided education to hundreds of aspiring Malagasy students. More than 35 students have passed through the ETP with higher degrees in zoology, paleontology and conservation biology.

"Many developing countries' education systems

have slid into a black hole," said Goodman. "My greatest effort isn't necessarily in documenting Madagascar's animals, but in giving young Malagasy students the knowledge and empowerment—the opportunity—to advance their country's conservation needs."

A place like no other

Comparable to California and Oregon combined, Madagascar is the world's fourth largest island. All of the land mammals there today belong to four groups—tenrecs (small insectivores), rodents, lemurs and carnivores—that probably floated to the island via land debris after its break from eastern Africa about 160 million years ago. Thousands of animal species that flourished from these ancestors can be found nowhere else on the Earth, appearing to have been plunked onto Madagascar from another planet altogether. New discoveries are swimming, flying or creeping past researchers' paths on a regular basis. One trip could churn up 10 unidentified creatures, leaving researchers in a perpetual state of awe—and anxiety.

Political turbulence over the past four decades and a dilapidated infrastructure have prevented scientists from working there until recently. Yet species are disappearing before they can even be named or described. Lack of economic growth has forced the Malagasy to turn to the land for subsistence: Slash-and-burn agriculture, conversion of forests to cooking charcoal and clearing land for cattle are the biggest threats to habitats and wildlife. If deforestation continues at this rate, Goodman said, the original large tracts of forest will fall, along with hundreds of plant and animal species.

While charismatic animals such as lemurs, our wide-eyed primate cousins, have attracted millions of conservation dollars, much of it evaporates in the country's bamboozled bureaucracy. Madagascar's new democratic president is trying to revamp the economy and infrastructure, but there's much to accomplish. Goodman's new book, *The Natural History of Madagascar,* is highly anticipated to catalyze worldwide interest in saving the landscape and wildlife.

A book of colossal intent

Co-edited with Jonathan Benstead of the Marine Biological Laboratory in Woods Hole, Massachusetts, and published by the University of Chicago Press, *The Natural History of Madagascar* is by far the largest synthesis of tropical biology ever written. Inspired by a similar book on Costa Rica, this 1,800-page volume contains contributions from nearly 300 scientists from 19 countries. Its lush photographs, accessibility and affordable price enhance its appeal to citizens and travelers as well as biologists, conservationists and policy-makers. Particularly exceptional is that 70 Malagasy scientists contributed to the tome, pulling their work out of the shadows of their foreign colleagues. Since the last inventory was published in the late 1800s, this book, available before the end of the year, is hailed as the single most important volume published on Madagascar's land, plants and animals. **TF**

Spiny forests occur in Madagascar's driest regions. Many trees have underground tubers that store nutrients and water, while their spiny bodies and poisonous leaves and bark keep animals from eating them.

One set of spines of this streaked tenrec (Hemicentetes semispinosus) *becomes embedded in an attacker's mouth in self-defense, while another set quivers, sending ultrasonic messages to other streaked tenrecs.*

The Natural History of Madagascar *will soon be available at The Field Museum's in-house and online (http://store.fieldmuseum.org) stores.* The Natural Wonders of Madagascar: Photographs by Harald Schütz, *an exhibition featuring brilliant images from this mystical island, runs Dec. 5, 2003, through July 5, 2004. Goodman will speak about his efforts on Dec. 6 at 2pm.*

National Geographic Live! An Interview with Michael Yamashita

Following two successful seasons, The Field Museum and National Geographic are once again presenting National Geographic Live! Find adventure, insight and inspiration through encounters with the world's top explorers, photographers and scientists. (See the calendar for the full schedule and ticket information.)

Below are edited excerpts from an interview with photographer Michael Yamashita, the first speaker on March 2. Using Marco Polo's book as his travel guide, Yamashita visited 10 countries and encountered many landmarks and peoples Polo wrote about following his legendary 24-year trek across Asia. Yamashita and his traveling companion, Mike Edwards, presented their journey in a three-part *National Geographic* series in 2001.

MICHAEL YAMASHITA

NADER DAVOODI

ITF: Did you read Marco Polo's *Description of the World?*

MY: Yes, and it's not an easy read. We used a version from the 1800s that's in two volumes and around a thousand pages, but it's the most complete. I made a shoot list from the places Polo visited. If he talked about a hot spring in a certain area, we'd go to each village and ask the locals if it existed. It was like a big treasure hunt. Amazingly enough, a lot of those places are still the same 700 years later.

ITF: Scholars have questioned Polo's credibility, largely basing their arguments not on what he did write about, but on what he omitted, such as bound feet. How did you address this?

MY: When I was researching the story, I found that he lived among the Mongols and would not have had much to do with the Chinese. He alludes to bound feet in his descriptions of the distinctive gait of Chinese women.

I believe he wrote about things that were of interest to him personally. He had no motive. He wasn't a writer; he was a merchant. And in those days, a travel book was filled with mythology. To write a real book and describe real things was unheard of.

One of his great defenders says he alone has contributed the most information to geographers about world geography, and no has given the world that much information since.

ITF: What was the most memorable leg of the trip?

MY: I've spent a lot of time in the Far East, so for me, Afghanistan was *the* experience. After all those years of civil war, the country has been destroyed, especially in the north. There's no infrastructure, no running water, no electricity, no telephones and very few cars. Everything is by donkey cart. It's biblical. Everyone's wearing leather shoes, tunics and turbans. To be in a place that took me back 700 years where I knew Polo must have been was a great experience. And it's not as meaningful if it's not hard. We became close to the people, and I'm wondering if they're still alive after 9/11.

I worked with Ahmad Shah Massoud, commander of the Northern Alliance. We flew in his helicopter to the Panjsheer Valley and I photographed him in battle. It was a great experience, even more significant after 9/11. We then traveled with a letter from him giving us free passage, and it just so happened that the area under his control was exactly Polo's route. We also saw the Taliban in Flushing Meadow.

ITF: What was the most interesting surviving custom you witnessed?

MY: In China, we were looking for people who ate raw meat. We hit the right village that said they did, but only on special occasions, and we wondered how we'd see it. The next day I met a student who had come back for his sister's wedding and we got invited. They were killing pigs and we were thinking, "Oh, my god. Polo never talked about raw *pork*, the one meat you wouldn't even think of eating raw. He just said raw 'meat.'" But of course as journalists we ended up eating it. We went through a lot of funny experiences like that.

See the calendar for ticket information, or visit www.nationalgeographic.com/lectures.

Series Sponsor: The Field Associates—a dynamic, diverse group of young professionals dedicated to promoting awareness of The Field Museum's collections, research and public programs. For information or to join, call 312.665.7133 or visit www.fieldmuseum.org/fieldassociates.

Education outreach activities related to the series are presented in collaboration with The Field Museum, the Geographic Society of Chicago and the Illinois Geographic Alliance.

YOURGUIDETOTHEFIELD

Calendar of Events for Winter 2003–2004 December–February

New Exhibition–The Natural Wonders of Madagascar: Photographs by Harald Schütz

Dec. 5, 2003–July 5, 2004

Discover the unique flora and fauna of this extraordinary island through 39 brilliant color photographs. Photographer Harald Schütz beautifully captures the one-of-a-kind Malagasy wildlife studied by Field Museum scientist Steve Goodman.

Join Goodman as he shares expedition slides and gives you an insider's look at the new exhibition. He will also discuss his new book, *The Natural History of Madagascar*, which will be available for signing after the lecture.

Saturday, Dec. 6, 2pm
Free with Museum admission

This exhibition was created by Harald Schütz in collaboration with The Field Museum.

Support for Year of Biodiversity and Conservation programming provided by the City of Chicago, Richard M. Daley, Mayor; Department of Environment, N. Marcia Jiménez, Commissioner.

©HARALD SCHÜTZ

Einstein

Through Jan. 19, 2004

See the world through the eyes of a genius. Meet Einstein, the man behind the revolutionary theories, through photographs, personal possessions, letters, original manuscripts and multimedia displays. Also ask about the Curator's Audio Tour, produced by Antenna Audio.

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COURTESY THE ARCHIVES, CALIFORNIA INSTITUTE OF TECHNOLOGY

Test Your Einstein Quotient

1. $E=mc^2$ explains:

A. Why stars shine
B. The existence of black holes
C. Solar eclipses

Answer: A. It shows that a relatively small quantity of matter can release a tremendous amount of energy.

2. Besides science, which of these were also passions of Einstein?

A. Music
B. Sailing
C. Women

Answer: All of the above. Einstein began violin lessons in childhood; he claimed to like sailing because it is "the sport that demands the least energy"; and he had affairs with women throughout his life and two marriages.

3. True or false: Einstein was the father of the atomic bomb.

Answer: False. When Einstein learned that German scientists had split the uranium atom and might soon be able to build atomic weapons, he urged President Roosevelt to start a similar research program here. His famous equation, $E=mc^2$, explains the energy released by an atomic bomb, but doesn't explain how to build one.

4. Which of these causes did Einstein not use his fame to support?

A. Civil rights in the United States
B. Creation of a Jewish homeland
C. A unified world government
D. The House Un-American Activities Committee
E. Socialism
F. Nuclear disarmament

Answer: D. In fact, even when he himself was denounced as a "Communist spy," Einstein persisted in criticizing the actions of Sen. Joseph McCarthy, head of the committee.

Organized by the American Museum of Natural History, New York; The Hebrew University of Jerusalem; and the Skirball Cultural Center, Los Angeles.

Einstein is made possible through the generous support of Jack and Susan Rudin and the Skirball Foundation, and of the Corporate Tour Sponsor, TIAA-CREF.

The Field Museum

General Museum Information: 312.922.9410
Family and Adult Program Tickets and Information: 312.665.7400

Year of Biodiversity & Conservation

The Field Museum

...Conservation explores the most pressing environmental ... opportunities to interact with Museum scien... personally involved in conservation.

Support for Year of Biodiversity and Conservation programming provided by the City of Chicago, Richard M. Daley, Mayor; Department of Environment, N. Marcia Jiménez, Commissioner.

Featured Exhibition:

The Natural Wonders of Madagascar. Photographs by Harald Schütz

(Dec. 5, 2003–July 5, 2004)

Discover the unique flora and fauna of this extraordinary island through brilliant color photographs.

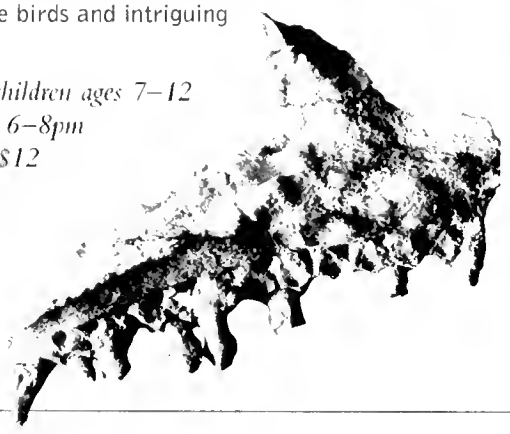
Family Behind the Scenes:

Madagascar Fossils

Jim Holstein, TFM Geology Dept.

Examine striking fossils from Madagascar—unusual crocodiles, rare birds and intriguing dinosaurs.

Families with children ages 7–12
Friday, Dec. 5, 6–8pm
$15, members $12



JOHN WEINSTEIN/GEO86236 4C

Lectures:

The Biological Wonders of Madagascar

Steve Goodman, TFM Zoology Dept.

Learn about Madagascar's biodiversity through breathtaking photographs from his fieldwork, exhibition and book.

Saturday, Dec. 6, 2pm, free with Museum admission

A World of Islands: Biodiversity and the Geography of Nature

Dr. Larry Heaney, TFM Mammals Dept.

Discover why the Philippines boast the highest concentration of one-of-a-kind plants and animals in the world.

Saturday, Dec. 13, 2:30pm, free with Museum admission

Scientist at the Field

Dr. Larry Heaney, TFM Mammals Dept.

Peruse fascinating mammal specimens and hear about Dr. Heaney's fieldwork in the Philippines, where he has discovered 20 new species of mammals.

LARRY HEANEY

Saturday, Dec. 13, 11am–2pm, free with Museum admission

Featured Exhibitions:

Plants of the ... (Ongoing)

From its simplest form, algae, to its most complex, orchids, this exhibition offers a magnificent collection of plant and flower models in large dioramas.

Eviction and Homecoming: Brazil's Panará Indians (Through Feb. 8, 2004)

These dramatic photographs document the triumphant struggle of the Panará Indians of Brazil to reclaim their homeland and cultural identity.

This exhibition was developed by Instituto Socioambiental, Brazil, in collaboration with The Field Museum.

Scientist Roundtable:

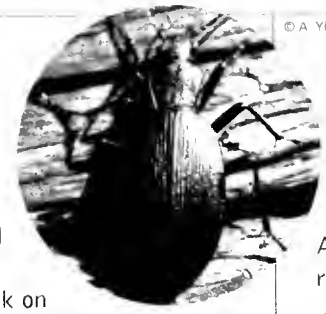
Biodiversity in the Neotropics

Bruce Patterson, Doug Stotz and Robin Foster, TFM Academic Affairs

Explore the New World tropics from Mexico to South America, home to approximately a quarter of Earth's plant and animal species.

Saturday, Jan. 10, 2pm, free with Museum admission

BRUCE PATTERSON



© A. YU. SOLODOVNIKOV

Scientist at the Field

James Louderman, TFM Insects Dept.

Hear about striking and rare insects and spiders from the American tropics. Louderman will also discuss his fieldwork on how clear-cut foresting affects insect populations.

Saturday, Jan. 10, 11am–2pm, free with Museum admission

Adult Behind the Scenes:

Plants and Animals of the Neotropics

Robert Lücking, TFM Botany Dept.

Explore distinctive plants and animals from Central and South America and the Caribbean in this tour through the Museum's research departments.

Saturday, Jan. 10, 9–11am
$15 per person, members $12

Featured Exhibition:

What Is an Animal?

(Ongoing)

Discover the three characteristics that all animals share in this interactive exhibition, then see how scientists classify animals.

JOHN WEINSTEIN/Z94029 11C

Lecture:

Mollusks: Megadiversity in the Sea

Rüdiger Bieler, TFM Zoology Dept.

Meet Museum scientists whose work on mollusks involves scuba diving, deep-water dredging and studying the Museum's collections.

Saturday, Feb. 14, 2pm, free with Museum admission

Scientists at the Field

Justin Grubich and Aaron Rice, TFM Fishes Division

Explore the most diverse group of vertebrates on Earth—fishes! View fish skulls, specimens, skeletons and hi-speed video footage that illustrate diverse coral reef and Neotropical freshwater fishes.

Saturday, Feb. 14, 11am–2pm, free with Museum admission

Family Behind the Scenes:

Field Museum Division of Fishes

Mark Westneat, TFM Fishes Division

Dive into the Museum's fishes division and discover what Field Museum researchers are studying.

CATHRYN C. SCOTT/GN90589

Friday, Feb. 27, 6–8pm
$15 per person, members $12

Coming in March...

Humans and Landscape Past and Present **Armour Symposium**

What does archaeology have to do with environmental conservation today? Join archaeologists, social anthropologists, geologists and environmental scientists to explore how connections between past cultures and ecosystems affect human and natural ecological change. This symposium, Indigenous Ecologies and Sustainability: Humans and Landscape Past and Present, illustrates archaeology's role in modern-day environmental conservation.

Saturday, March 6

Call 312.665.7448 or email twachter@fieldmuseum.org to register.

R.K. ENSHWILLER

Family Overnight

Dozin With th[illegible]

Sue the *T. rex* is having a sleepover! Join us for a night of family workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and travel back in time to the Mesozoic Era. Then spread your sleeping bag amidst some of our most popular exhibitions. The event includes an evening snack and breakfast.

Families with children ages 5–12
5:45pm on Saturday, Dec. 27
until 9am on Sunday, Dec. 28
$47, members $40

GEORGE PAPADAKIS/GNH/7134.1C

Family Workshops

Family Storytelling

Fox Ellis, Master Storyteller

Come listen as Peoria's Fox Ellis spins a lively tale, the first part in a three-part series focusing on storytelling. Ellis uses his craft to teach children and adults alike about the importance of oral histories.

Families with children ages 5–12
Saturday, Jan. 10, 10am–noon
(The other series dates are Feb. 21 and April 3.)
$10, members $8
Series of three $20, members $16

African Heritage Festival

The People of the African Diaspora

Anthony Young, Howard University

In this four-session course, learn how the mystical dimension of religion and the Black Church characterize the dominant experience of people of the African Diaspora throughout the United States, including Chicago.

Tuesdays, Feb. 3, 10, 17 and 24, 6–8pm
$70, members $60

Photographs of the Diaspora in the Americas

Michael Bracey, photographer

Explore award-winning photographer Michael Bracey's images that showcase lifestyles and commonalities among people of African descent living within the Americas. Since 1997, Bracey has been documenting the African Diaspora in black and white, and continues to use his craft to educate people about African heritage.

© MICHAEL BRACEY

Saturday, Feb. 7, 2:30pm
$10, students and educators $8, members free

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change.
Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

The Natural Wonders of Madagascar: Photographs by Harald Schütz
December 5, 2003–July 5, 2004

Urban Expressions: Young Voices, New Technologies
February 13, 2004–January 17, 2005

50 Years of Powwow in Chicago
Through January 18, 2004

The Two of Us

Mike Bradecich, TFM Education Dept.

Travel the Museum's exhibition halls, hear stories, touch objects, make art projects and enjoy snacks. This winter we'll learn about mastabas, monkeys and mud.

Families with children ages 3–5
Tuesdays, Jan. 20–March 9
10–11:30am or 1:30–3pm (Choose one time.)
$95 per child, $80 per member child
For each child, one adult attends at no charge.

Sue School

Sharpen your pencil and get ready to learn about paleontolo
Talk to members of the Museum's geology department about
the science of Sue, the most famous dinosaur in the world.
Colossal dinosaur puppets will roam Stanley Field
Hall to meet and greet dinosaur enthusiasts o
all ages.

Saturday and Sunday, Jan. 3 and 4, 9am–5pm; Special guest Sue Hendrickson, discoverer of Sue.

Saturday, Feb. 7, 11am–2pm; Specia guest Dr. Peter Makovicky, TFM Geology Dept.

Free with Museum admission.

GEORGE PAPADAKIS/GN89608 6C

Adult Courses

World of Words Presentation: Voices, A Spoken Word Performance

Check out this exciting evening of open-mic performances in the increasingly popular spoken-word movement. Each poet's mix of dialogue and drama is both thought-provoking and entertaining. Join such pioneers as Triple Black, winner of the Def Poetry competition, Brenda Matthews, Moe Mentum, Armen Rah and Lorra.

Friday, Feb. 20
7:30pm, open-mic registration 7pm
$10, members $8

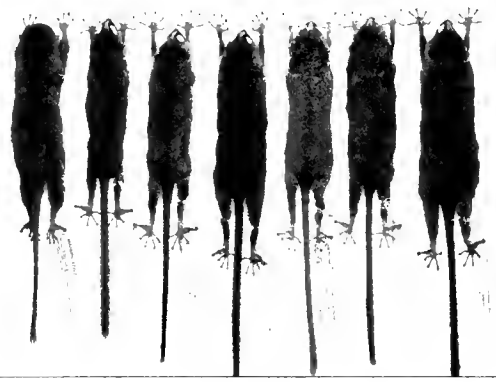
The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by the Institute of Museum and Library Services, a federal agency; by the Illinois Arts Council, a state agency; and by a CityArts Program 4 Grant from the City of Chicago Department of Cultural Affairs.

Madagascar Fossils

Jim Holstein, TFM Geology Dept.

Explore why Madagascar is an ideal place to find and study vertebrate fossils, and learn about the techniques used to collect and prepare rare fossil finds of the unusual animals that once lived in this ancient environment.

Saturdays, Jan. 17 and 24, 10am–noon
$40, members $34



JOHN V. EINSTEIN/Z94245C

Einstein
Through January 19, 2004

Eviction and Homecoming: The Story of Brazil's Panará Indians
Through February 8, 2004

Fragments From the Temple Mount of Herod the Great: Archaeology News From the Holy Land
Through March 14, 2004

Spring

...el the world with NATIONAL GEOGRAPHIC LIVE!

...ure, insight and inspiration through encounters with ...'s top explorers, photographers and scientists. The third ...n of this popular speaker series in our newly renovated James ...son Theater promises a world of adventure.

A Journey with Marco Polo

Michael Yamashita, Photographer

Retrace Marco Polo's legendary 24-year trek across Asia. Using Polo's book as his travel guide, Yamashita visited 10 countries and encountered many landmarks and peoples Polo wrote about, belying recent scholarly questions about the authenticity of Polo's accounts. Vibrant images and fascinating stories will bring this dramatic journey into the present.

Tuesday, March 2, 7:30pm

The Passion of Seeing Wildlife

Mattias Klum, Photographer

Daring, tenacious and artistic, Klum is known for his extreme photography—often facing seemingly impassable habitats or prolonged physical hardship to capture the world's most elusive wildlife. Learn about his assignments on Borneo, Southeast Asia's poisonous king cobra and India's endangered Asiatic lion.

Tuesday, March 16 7:30pm

Chimpanzees, Tools and Termites

Elizabeth Lonsdorf, Primatologist

Blazing the trail that Jane Goodall pioneered years ago, Lonsdorf is studying termite "fishing" among chimpanzees at Tanzania's Gombe National Park. Find out how male and female youngsters use different mechanisms to learn these "cultural" behaviors, which are present in some groups but not in others. Lonsdorf is the director of field conservation at Chicago's Lincoln Park Zoo.

Tuesday, April 6, 7:30pm

Tibetan Traverse

Rick Ridgeway, Conrad Anker and Jimmy Chin, Mountaineers

Follow the migration of the chiru, a tiny antelope from Tibet's Chang Tang plateau that is being poached for its fine wool. In search of the chiru's unknown calving grounds to make a case for the habitat's protection, the mountaineers encountered spectacular landscapes, challenging terrain and abundant wildlife.

Tuesday, May 4, 7:30pm

© JIMMY CHIN

Ticket Information

Call 312.665.7400 or visit www.nationalgeographic.com/lectures to purchase tickets. A limited number will be available onsite the day of the event starting at 5:30pm, but we recommend reserving tickets in advance since this series sells out.

Also, a series subscription makes a great gift! We'll send the tickets along with a personalized gift card at your request.

...es Subscriptions—On Sale Dec. 1

...ers Circle *Ensure the continuation of NG Live! Benefits (reserved seating, a private reception and a signed book: ...TFM, NG and Geographic Society of Chicago members $350*

Patron *(reserved seating): $110; TFM, NG and Geographic Society of Chicago members $100*

General admission: *$84; TFM, NG and Geographic Society of Chicago members $70; students $48*

Individual Events—On Sale Jan. 20

Patron *(reserved seating): $30; TFM, NG and Geographic Society of Chicago members $28*

General admission: *$24; TFM, NG and Geographic Society of Chicago members $22; students $15*

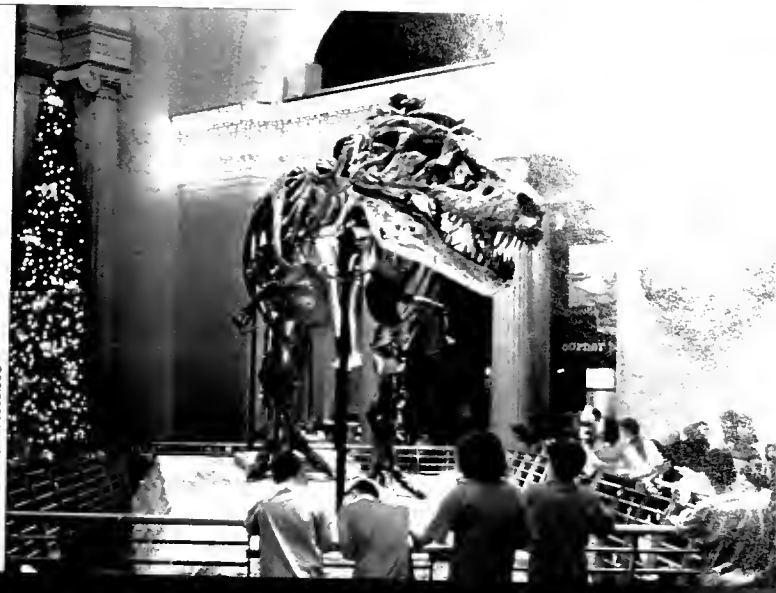
...The Field Associates—a dynamic, diverse group of young professionals dedicated to promoting awareness of The Field Museum's collections, research and public programs. For information or ...665.7135 or e-mail: www.fieldmuseum.org/fieldassociates.

...programs related to the series are presented in collaboration with The Field Museum, the Geographic Society of Chicago and the Illinois Geographic Alliance.

Peaceable Kingdom

Make The Field Museum a part of your holiday traditions! Our Peaceable Kingdom Festival offers fun for the entire family with music reflecting cultures throughout the Chicagoland area and around the world. Enjoy The Yellow River Performing Arts Company, individual performances by Grammy-nominated Margaret Carlson, soprano Kimberly Jones and tenor Cornelius Johnson. Songsters Steve Kwame Cobb and Chavanduka will also be there to help celebrate Kwanzaa.

Saturday, Dec. 27, 11am–3pm, free with Museum admission



JOHN WEINSTEIN/GN90363.36C

See and hear the best of African Heritage Month.

Family Performance: Alyo Children's Dance Company

Celebrate the diversity and richness of Africa and its people through music, dance and oral traditions, featuring a performance by this talented company.

Saturday, Jan. 31, 1pm, free with Museum admission

Performance: Sterio and the Garifuna Performing Arts Group

Enjoy the energetic, celebratory music and dance that shares their culture and the story of their heritage.

Saturday, Feb. 7, 11am, free with Museum admission

Family Program: Master Storyteller Linda Gorham

Hear master storyteller Linda Gorham share the historical accounts of Ruby Bridges and John Henry, as well as traditional legends in the second session of our three-part family storytelling series.

Saturday, Feb. 21, 11am and 1pm
(The other series dates are Jan. 10 and April 30.)
$10, members $8
Series of three $20, members $16.

COURTESY LINDA GORHAM

Permanent Hall Renovations

Come visit the Pawnee Earth Lodge in its new home when it reopens in September 2004! The lodge is currently closed to visitors, but next fall, you will be able to enter it from either the Hall of Northwest Coast Indians and Arctic Peoples or the Hall of North American Indians. We are also pleased to announce that a full-scale renovation of Life Over Time will begin in May 2004; the entire exhibition will therefore close at this time and reopen in 2006. More news about the renovation, and the renovation of our Americas Halls, will be featured in these pages.

Investigate ancient art and modern traditions.

50 Years of Powwow in Chicago

Through January 18, 2004

Dynamic photographs explore a vibrant celebration of Native American cultures in today's urban world.

50 Years of Powwow in Chicago is presented by The Field Museum in collaboration with the American Indian Center.

Eviction and Homecoming: The Story of Brazil's Panará Indians

Through February 8, 2004

These dramatic photographs document the triumphant struggle of the Panará Indians of Brazil to reclaim their homeland and cultural identity.

This exhibition was developed by Instituto Socioambiental, Brazil in collaboration with The Field Museum.

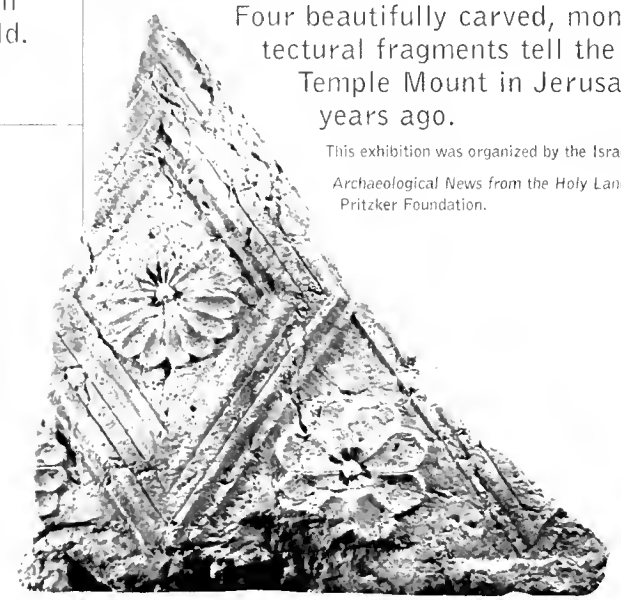
Fragments from the Temple Mount of Herod the Great: Archaeological News from the Holy Land

Through March 14, 2004

Four beautifully carved, monumental architectural fragments tell the story of the Temple Mount in Jerusalem 2,000 years ago.

This exhibition was organized by the Israel Antiquities Authority.

Archaeological News from the Holy Land is made possible by the Pritzker Foundation.



MARIANA SALZBERGER, ISRAEL ANTIQUITIES AUTHORITY

Visitor Information

MIKE SIOREK

Getting Here: Soldier Field's new North Garage has just opened across the street from our main entrance. Visit www.fieldmuseum.org for the latest information on new parking lots/rates, free trolleys and public transit.

Hours: 9am–5pm daily. Last admission at 4pm.

To get tickets: *Einstein* is a specially ticketed exhibition. Enjoy the *Einstein* Curator's Audio Tour, which is $5 for the general public and $4 for members and children up to 11. Member passes can be reserved in advance by calling Ticketmaster at 312.902.1500 (service charges apply) or coming to the membership desk near the Museum's south entrance (no service charges). Non-member tickets can also be reserved in advance through Ticketmaster or in person at the Museum's admission desks. Day-of tickets are available at the Museum while supplies last.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the west entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

Information: 312.922.9410 or www.fieldmuseum.org

Blind Date Redefined

A cluster of worm-snails, Dendropoma sp.

Inset: A worm-snail, Serpulorbis sp., *retracting its mucus net.*

IMAGES BY RUDIGER BIELER

Ugly as sin and often mistaken for a worm, the curly worm-snail would not likely end up in a beachcomber's pocket. After it hatches, it glues itself to rocks or other hard substrates and hangs out there—for the rest of its life!

Rüdiger Bieler, PhD, Field Museum curator of invertebrates, has found many worm-snails as part of a survey of the Florida Keys, a national marine sanctuary. The unmoving mollusk poses interesting biological questions about how it eats and reproduces, among other behaviors.

To eat, the worm snail pitches a net of mucus into the water that traps food particles, then retracts the net and consumes it, reusing its own resources. To reproduce, the male releases a sperm package into the current, where it can drift for weeks. The package must stumble across a female whose mucus web is extended, become lodged and get sucked back in with the food. Somehow the sperm winds its way into her reproductive chamber and fertilizes the eggs. As Dr. Bieler joked, this gives "blind date" a whole new meaning.

The survey started off in 1997 with 582 known mollusk species and has expanded to more than 1,700. Bieler and his colleagues keep finding new species, some no bigger than a grain of sand. Cross-referencing what they collect with existing collections and literature—be it a 19th-century monograph or a shell club newsletter—they are establishing an accurate record toward managing the sanctuary. If 582 species had been taken at face value to prove the success of the sanctuary 20 years from now, some 1,100 species could have disappeared unnoticed.

Dr. Bieler will speak about his research for the Year of Biodiversity and Conservation (YBC) on Saturday, Feb. 14, at 2pm. Free with Museum admission.

Threatened Treasures of the Coral Reef

Justin R. Grubich, PhD, Postdoctoral Fellow, and Aaron N. Rice, Graduate Student, Department of Zoology

My depth gauge reads 15 meters (about 45 feet). I feel tiny, swallowed up by the immense deep blue that envelops me. To my right, I see my dive buddy, Aaron Rice, collecting survey data. A moving kaleidoscope of corals, sponges and fishes bedazzles me with its iridescent colors, fantastic shapes and captivating action. Up to this point, our survey of coral reef fishes had been relatively normal, until a looming shadow catches my eye.

CHARLES L. RICE

Rice and a humphead Maori wrasse, Cheilinus undulatus.

My heart pounds as I sense something as big as me slowly and ominously gliding forward, propelled not by its tail like a shark, but by large, flapping pectoral fins that make it appear like a huge green bird in flight. Soon recognizing it as a wary humphead Maori wrasse *(Cheilinus undulatus),* we relish the moment since specimens topping 100 pounds are rare, and human activity has taken a toll on this graceful leviathan.

Scientists have been cataloguing fish biodiversity—both the number of species and their rich natural histories—for centuries. Yet most of our planet's living waters still lie undiscovered, a source of concern as habitats and species are increasingly besieged by pollution, overfishing and climate change. Answering questions like how fishes work, where they live and how they're related may seem like a daunting task for the thousands of reef species that have been identified and the countless others that have not. But what we do learn about behavior, ecology and evolution can help make a proverbial splash in the bucket of oceanic conservation efforts.

Coral reef buffet

For every animal or plant that exists in the coral reef community, from microscopic plankton to crunchy invertebrates, coral reef fishes have evolved specialized anatomies and behaviors to eat them.

Like the buffalo that once roamed vast prairies, grazing on grasses to maintain the landscape, comb-toothed surgeonfish and beaked parrotfish scrape the thick algal turf to prevent it from overgrowing sensitive coral animals. One Field Museum research project compares feeding behaviors between these herbivores and their carnivorous relatives. Carnivorous fishes have to react fast to capture escaping prey, whereas herbivores forage for sedentary sources such as algae. Examining how their mouthparts, fins and senses are similar or different and how they contribute to finding food is a good case study on how specialization evolves.

Hogfishes and their wrasse kin are the reef's strongmen when it comes to feeding. A second set of jaws hidden in their throats performs like a powerful nutcracker to crush hard-shelled clams, oysters and conchs. Triggerfish also use stalwart chisel teeth like bolt cutters to snap off crab legs and urchin spines. A 5-pound fish can generate bite forces more than 10 times its own body weight.

In contrast to biting fishes, many coral reef fishes inhale their fellow finned inhabitants. Big-mouthed groupers and tube-snouted trumpetfish creep up and ambush their prey through stealth and camouflage. When they get just close enough, they lunge forward and rapidly suck their prey into their gaping jaws in fractions of a second, faster than the human eye can see.

Courtship on the reef

When it comes to reproductive strategies, reef fishes do it all. Wrasses, parrotfish and triggerfish are polygamists that form harems comprised of one dominant male and several females, whereas butterflyfish pair up and mate for life. Their fidelity is so strong that they try to minimize the amount of time they're separated. The promiscuous yellow tang forms huge spawning aggregations in which individuals just let loose.

Imagine changing your gender to improve the odds of finding a mate—an unusual but common behavior among coral reef fishes called sequential hermaphroditism. This primarily happens when a dominant male or female dies and another fish needs to fill the vacant position. Anemonefish, popularized in the movie *Finding Nemo,* start life as males and change to dominant females (protandry), while other fishes like triggerfish, parrotfish and their wrasse kin begin as females and change to male (protogyny). Going through life as just one sex (gonochorism) is a seemingly rare occurrence among most reef fishes.

A female triggerfish exhibits mothering behaviors akin to a watchful bird. After spawning, she forms a nest that she fans with oxygenated water to help the larvae breathe and defends against potential predators: Fish eggs are a popular delicacy. Divers need to be wary of a nest-guarding triggerfish. Mothers have been known to attack divers if they get too close to the nest, and the titan triggerfish has sent unfortunate divers to the hospital.

Conserving reef fish diversity

Storms, tides and other natural forces make coastlines a dynamic zone for coral reef habitats and the organisms that live among them. But humans and industry also occupy coastlines, startling this complex ecosystem with pollution run-off, a booming seafood industry and other hazards to its delicate existence.

Field Museum scientists are actively, if not feverishly, involved in collecting data on what's out there to aid in our own research projects and local or regional conservation plans. With so little documented, we don't always know what we're looking for, which is especially disheartening since we can suppose that species abundance and diversity is probably less than it was even 10 years ago. We're asking such questions as do fish roam freely in undefined territories, or do they congregate like elephants to a watering hole? What do size, shape and color have to do with survival? How did they evolve so many peculiar feeding, reproductive and locomotive behaviors? We have to document diversity before we can understand decline, and whatever information we gather can help us identify threatened species or contribute to creating marine protected areas.

We recently visited Busuanga, an island in the Philippines, to work with the local fishes bureau on cataloguing reef fish biodiversity of this region. Our surveys yielded at least 40 new potential species, which gives us a double sense of hope and urgency since Philippine waters contain some of the world's most threatened reefs. The last survey was done in the 1950s and was incomplete, making ours the first complete reef fish index of this particular region. Unfortunately for the iconic humphead Maori wrasse, we saw only dead juveniles that had been speared by local fishermen. We have no idea what its population size is, where its spawning locations are or even what the hump is for in this vulnerable species.

The real work is only now beginning, since we have just completed sorting through the 26,000 specimens gathered. The Field Museum's efforts in assessing and documenting fish biodiversity—even in small regions like Busuanga—can provide critical evidence toward implementing vital reef conservation plans. **TF**

For the Year of Biodiversity and Conservation, Rice and Grubich will share specimens and video on Feb. 14, 11am to 2pm. Free with Museum admission.

CHARLES L. RICE

JUSTIN R. GRUBICH

AARON N. RICE

AARON N. RICE

Left: The vicious, nest-guarding titan triggerfish, Balistoides viridiscens.

Center: Mexican hogfish, Bodianus diplotaenia, *and its pharyngeal jaw (inset) that crushes clamshells.*

Right: A mated pair of saddleback butterflyfish, Chaetodon ephippium.

Collecting Liverworts Down Under

Matt von Konrat, PhD, Collections Manager, and John Engel, PhD, Curator, Department of Botany

Rising straight out of the sea and shrouded in mist, Mount Moehau on New Zealand's North Island is as revered as the chief whom legend says is buried there. Before a recent Field Museum research trip up the tapu (sacred) mountain, a Maori elder led our team, which included our collaborators and a Maori guide, in a ritual called a karakia, a common practice before entering a culturally significant area. We held hands in a circle, bowed our heads and silently listened to the elder's prayers. At the ceremony's close, we began our search for the inconspicuous and elusive liverwort.

Background: Frullania congesta, *magnified 75 times under a scanning electron microscope.*

Funded by the National Geographic Society, our Mount Moehau expedition was part of a larger investigation of New Zealand's rare and threatened liverworts. These gorgeous, complex organisms, which with mosses and hornworts are known as bryophytes, form a major component of New Zealand ecosystems. Acting as rainfall interceptors, they help stabilize terrain and prevent soil erosion. They indicate pollutants in the atmosphere, such as heavy metals, and potential large-scale changes to a habitat or ecosystem. Bryophytes also are home to fungi, bacteria, other bryophytes and seed plants, and invertebrates.

Left: Cell anatomy and oil-bodies of rare species, Neogrollea notabilis.

Right: Dr. John Engel and Dr. Matt von Konrat hike Mount Arthur, South Island, New Zealand.

An extraordinary 80 percent of the flora of New Zealand—one of 25 global biodiversity hotspots—is endemic to the archipelago, which, like Madagascar, was once part of the ancient supercontinent Gondwanaland. Containing more than 200 liverwort species found nowhere else, New Zealand is the perfect natural laboratory and a center point for institutions invested in conserving these vulnerable plants. It also has the largest liverworts in the world, *Schistochila appendiculata* and *Monoclea forsteri,* and the most morphologically complex liverwort in the world, *Schistochila glaucescens.*

Along with the Auckland War Memorial Museum, the University of Auckland and the Department of Conservation, we are analyzing a range of data, including ecology, reproduction and spatial distribution. We've assessed that considerable uncertainty surrounds the population status of more than 20 liverwort species. We've added to the knowledge of how several species, previously known only through scant collections, are distributed. We also collected new records for the region, new species to science and species outside of their known range.

Matt von Konrat, PhD, a Kiwi himself, manages the Museum's collection of 180,000 bryophyte specimens. He is also working with Japan's Tokushima Bunri University to assess the biological activity and taxonomic significance of isolated chemical compounds in selected liverworts. Laboratory tests have shown that some of these chemicals have anti-microbial, anti-fungal, muscle relaxing and anti-cancer capabilities. The active chemicals are found in oil-bodies, globule-like organelles that are unique to liverworts and come in a variety of sizes and shapes.

A Google search for liverworts turns up a smidgen of information. To fill in the gap, Dr. von Konrat and John Engel, PhD, Field Museum curator of bryology, are building a comprehensive website—the first of its kind—devoted to these plants. Prominently featuring the Museum's collections, it will include an image library, interactive keys, maps, striking images and descriptions. It will also serve as a companion to the *Liverwort Flora of New Zealand,* a new multi-volume text co-authored by Dr. Engel that consolidates all that's known about their ecology and biology. Both media will help scientists, students and conservation biologists around the world learn about these plants and more easily identify liverwort species.

Compared to other land plants, many fundamental aspects of liverworts remain undisclosed. The Field Museum's leadership in amassing and sharing information—whether with research institutions or the *tangata whenua* (people of the land)—is vital to protecting and managing the habitats where they occur. ITF

Look for www.liverworts.org to open this winter. Or visit www.discoverlife.org for interactive keys.

The Women's Board Celebrates

DAN REST

An ancient Buddhist temple bell echoed as a colorful dragon danced through the crowd.

On Oct. 25, 800 guests wandered through sumptuous courtyards in Stanley Field Hall at the Dream of Nine Dragons Ball. Inspired by the upcoming exhibition, *Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong*, the gala raised more than $900,000 to support The Field Museum's conservation efforts.

Left: Field Museum Women's Board President Patricia Schnadig (left) with ball co-chairs Jean Baldwin-Herbert, Daphne Hoch Cunningham and Dorothy Mackevich Marks.

DAN REST

Frantz Cartright, President, CATH Associates (left), and John McCarter, Field Museum President and CEO.

The Women's Board gratefully acknowledges the gala's sponsors, collectively called Architects, Engineers, Building Consultants & Contractors—Friends of The Field Museum. They include: CATH Associates, Inc.; Crown Construction & Development; Era Valdivia Contractors, Inc.; Hill Mechanical Corp.; Kroeschell, Inc.; McGuire Engineers, Inc.; Superior Mechanical Systems, Inc.; Urban Resources, Inc. Architects & Planners; and Vernon Williams–Architects.

The festive atmosphere continues on Dec. 4 with the annual Children's Holiday Celebration, a seasonal treat filled with crafts, stories and entertainment. The Women's Board thanks Sears, Roebuck and Co. for its generous support of this event, which will bring holiday cheer to more than 1,000 children and adults from the Chicago area.

New Parking Just Steps From Field Museum

Parking on Museum Campus has never been more convenient.

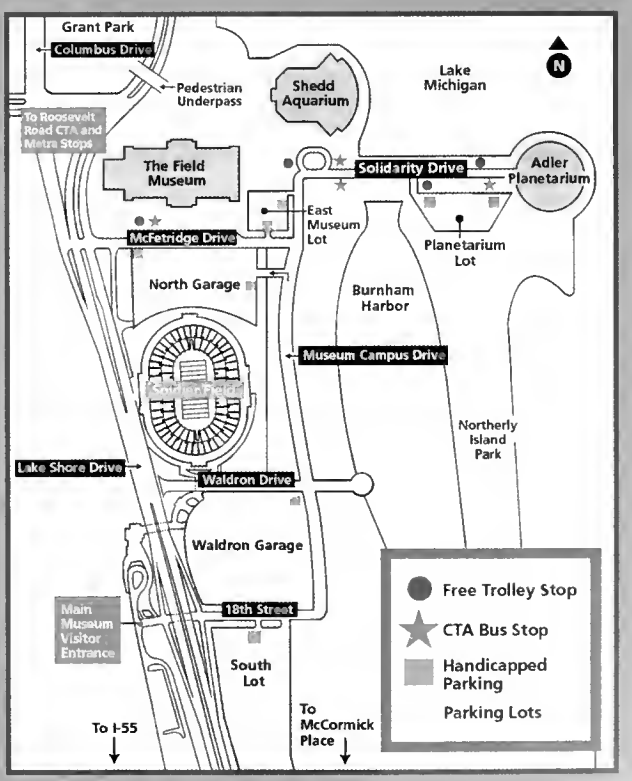
Soldier Field's new North Garage, a 2,500-space indoor lot, has just opened across the street from The Field Museum's south entrance. The new Waldron Garage south of Soldier Field provides 1,700 spaces for overflow on busy days. For quick access, exit onto 18th Street from Lake Shore Drive and follow it until it becomes Museum Campus Drive. This new lakefront route takes you to the North Garage, the East Museum lot (between the Field and Shedd Aquarium) and the Adler Planetarium lot.

You can also access Museum Campus using McFetridge Drive, but 18th Street is a more efficient option. Taxis, trolleys and CTA buses will continue to drop you off via McFetridge Drive if you choose not to drive.

All lots offer handicapped parking. Each lot is $12 a day, and discounts apply if you arrive before 9:30am or after 4pm. These hours and rates do not apply when there are special events at Soldier Field. Parking is not available to Museum Campus visitors on Bears' home game days. Visit www.museumcampus.org for details.

Other wonderful amenities dot the revitalized parkland. A sledding hill offers wintertime fun and a breathtaking view of the city. Families can stop by the Children's Garden across from the Museum to play. Or pay homage to our country's veterans at the 250-foot-long water wall as you exit the North Garage on your way to The Field Museum.

Thank you for your patience during the construction period. We welcome you back to Museum Campus.



Tale of Two Thompsons

Stephen E. Nash, Head of Collections, Department of Anthropology

Every specimen was personally found by me and taken by hand...and the notes made make the specimens...priceless and will give to the Museum at one blow the best existing collection of the kind from the ruined groups of the Yucatán.
~ Edward H. Thompson

While capturing the 19th-century romantic spirit of Edward H. Thompson (Edward), an early Field Museum anthropologist, such flourish did little to validate his legitimacy as a Maya scholar in later years. J. Eric S. Thompson (Eric; no relation to Edward), a successor who also researched prehistoric Maya cultures, frequently expressed his disdain for Edward's research techniques and results. Their disparities, however, say little of what each man contributed between 1890 and 1934 to our understanding of Neotropic (New World) cultures.

A.P. MAUDSLAY/A92555

West courtyard and tower of the palace at Palenque, Mexico, built around 600 AD.

While working for the World's Columbian Exposition of 1893, Edward created realistic, full-sized papier mâché reproductions of Maya ruins that were popular with the Fair-going public. They especially captivated Allison Vincent Armour, a Field Museum trustee and young member of one of Chicago's wealthiest families. In 1894, Armour sailed his yacht to the Yucatán to visit Edward and "assist" in collecting. Under Armour's patronage, Edward added considerably to the Museum's Maya collection and gave credence to the Museum as a hub for Mesoamerican studies. As an expatriate, Edward spent the next four decades living and working in the Yucatán.

While typical for the time, Edward's excavation and collecting techniques are today considered inadequate or worse. He gathered objects without recording their archaeological context, saved only what he considered to be museum-quality and sent objects across international borders. He allegedly gutted the High Priest's Grave and Sacred Cenote at Chichén Itzá, and the accuracy of his notes has been questioned.

Regardless of Edward's practices, scholars are still beholden to his collections, and museums still display his photos and the artifacts he unearthed. It is also often overlooked that living among the Maya influenced Edward's progressive awareness of the relationship between understanding the present in order to reconstruct the past.

It is likely that Edward and Eric crossed paths at Chichén Itzá in 1926. Eric knew of Edward's reputation and wrote in 1929 that there was only "a fragment of truth hidden below the fantastic embroidery of a lurid imagination. The romantic mind of Mr. Edward H. Thompson pervades [Chichén Itzá] to make it useless for scientific purposes."

A proponent of sound scientific classification, Eric systematically collected nearly 1,000 Maya objects. While most archaeologists focused on temples at large sites, Eric excavated smaller, less-glamorous sites to study the daily life of average people. His collection includes a glorious range of mundane, technological and artistic artifacts, including elaborate ceramic effigy whistles, fiber gourd carriers, decorative jade earplugs and eccentric flint objects. The whole ceramic vessels he found offer an unparalleled sequence of pottery types that span a thousand years of history.

Eric himself was not above getting artifacts to the Museum, whatever the circumstances. Most government permits required that excavated artifacts be divvied up among museums with a vested interest in the area. Eric reportedly disguised a vase from British Honduras (now Belize) with ash and soil to prevent the British Museum from selecting it. Yet he also contributed greatly to Maya scholarship. He published the first correlation of the Maya and Christian calendars and produced one of the first catalogues of Maya hieroglyphics. His still-popular leaflet, *The Civilization of the Mayas,* went through 57 editions before his death in 1975.

Both Edward and Eric were caught, at different times, in a classic battle between academia and business, trying to collect and study while responding to a public thirst for all things Maya. Their story is but a small strand in a rich weave of scholarship, philanthropy, success, tragedy, chutzpah and all the aspects that make life—particularly scholarly life—so interesting.

This article was inspired by Donald McVicker's contribution to Curators, Collections, and Contexts: Field Museum Anthropology 1893–2002. *Edited by Stephen E. Nash and Gary M. Feinman, this new publication is available in the Museum store.*

Double Discount Shopping Days

The Field Museum stores are your one-stop-shop for distinctive holiday gifts.

On Dec. 8, 13 and 17, members receive 20 percent off all Museum merchandise—an additional 10 percent over your regular discount. Explore three stores, or visit **http://store.fieldmuseum.org.** Our handcrafted gifts, colorful textiles, home accessories, children's items and books will help you create meaningful, educational holiday presents.

Proceeds support The Field Museum's education and research efforts. Bring your membership card to the Museum, or have your member number handy if you visit the online store.

New Annual Fund Website

Visit the new annual fund website at www.fmnh.org/annualfund. Learn more about upcoming events and programs and how your generous support helps the Museum expand its collection and educational offerings.

CATHRYN C. SCOTT

The Essential Year-round Gift

For friends and family who seem to have everything, a Field Museum membership is the essential gift to enjoy all year.

Available at three levels—$60 for individuals, $70 for families or $100 to join the Annual Fund—membership offers terrific benefits, including:

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- Free passes to 2004's special exhibitions, *Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong* and *Jacqueline Kennedy: The White House Years;*
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- Discounts on educational programs, food and merchandise;
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Give a Field Museum membership, and we'll give you *and* your recipient an exclusive, limited-edition tote bag. To purchase the $60 individual or $70 family membership, call 866.312.2781. To purchase an Annual Fund membership at $100, call 312.665.7777. You can also fill out the form below and mail it in. Thank you for your support.

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The Field Museum's Year of Biodiversity and Conservation (YBC) explores the most pressing environmental topics of our time through special lectures, exhibitions, opportunities to interact with Field Museum scientists and suggestions on how you can become personally engaged in conservation.

Look in this issue's calendar for programs on island biodiversity in December, the Neotropics in January and living waters in February. Or visit **www.fieldmuseum.org/biodiversity** for a gorgeous, information-packed look at what the Museum is doing—and what you can do—to understand and protect our planet's rich plant and animal life.

At right, US Congresswoman Judy Biggert, Field Museum President and CEO John McCarter and City of Chicago Department of Environment Commissioner N. Marcia Jiménez welcomed more than 500 participants and hundreds of supporters to the Race to Stop Global Warming, the YBC kickoff event.

Biodiversity & The Field Museum

Rüdiger Bieler, Ph.D.

Curator of Invertebrates
Department of Zoology
The Field Museum

Dr. Bieler's research focuses on marine mollusks and diversity in island groups such as the Florida Keys. His work with colleagues from around the world has nearly tripled the number of mollusk species known to inhabit the area.

Hear Dr. Bieler speak on Saturday, February 14 at 2 p.m.

INTHEFIELD

Spring 2004
March May

The Field Museum's Member Publication

Splendors of China's Forbidden City

Positive Steps Follow Challenging Times

JOHN WEINSTEIN /GN881196

The past few years have been difficult for all of us, both outside and inside The Field Museum. World events, a decline in the stock market and construction on Museum Campus affected our endowment, donations, government support and attendance. But we are rebounding. Whether you have just joined the Museum, increased your annual support last year or are part of our invaluable 600-plus volunteer corps, you have helped us get through a tough period.

We are poised to have an excellent year in 2004.

- Our scientific efforts are flourishing, as measured by new species discovered, growth in our collections and more critical environments conserved. Among accomplishments throughout the research areas, Bruce Patterson, PhD, MacArthur Curator of Mammals, has just published the definitive book on the best-known lions of all time—*The Lions of Tsavo*.
- We continue to be a museum leader in receiving grants from the National Science Foundation and other major grant-making organizations.
- The new central plant is operational, with improvements in cost and energy efficiency. The plant's updated heating and cooling equipment allows us to better control the temperature and humidity in our collections areas, while providing greater comfort year-round for our staff and visitors.
- The remodeled James Simpson Theatre, opening for the National Geographic Live! series in March, features elevators, new seats and upgraded acoustics. A handicapped entry and seating and wider aisles make it fully accessible to all visitors.
- We continue to develop classes, fieldtrips, overnights and professional workshops for learners of all ages and backgrounds. Take part in the remaining Year of Biodiversity and Conservation programs. Also join expeditions@fieldmuseum to witness the growth of peregrine falcon chicks from nesting through flight.
- Three excellent exhibitions are scheduled for 2004: **Splendors of China's Forbidden City**: *The Glorious Reign of Emperor Qianlong;* **Machu Picchu**: *Unveiling the Mystery of the Incas;* and **Jacqueline Kennedy**: *The White House Years.*
- The 170,000-square-foot Collections Resource Center is scheduled to open this fall, providing state-of-the-art research laboratories and mobile shelving in a controlled environment for more than two million artifacts and specimens.
- Two new permanent halls will open in 2006, *Halls of the Americas* and *Life Over Time*. Both tell stories that are central to our mission—the peopling of the Americas and the process of evolution.

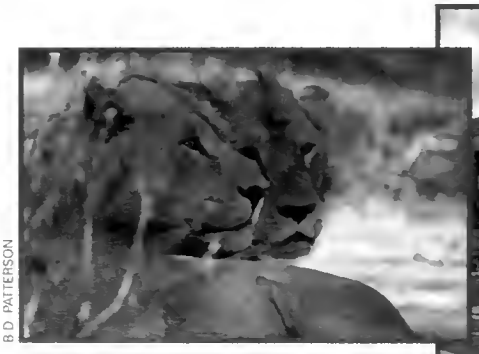
We are grateful to our members, annual fund donors and other Museum supporters who sustain our mission to explore the Earth and its peoples through public education and scientific discovery and conservation. Thank you for keeping The Field Museum in your life.

John McCarter

John W. McCarter, Jr.
President and CEO

Left: A new book covers the history and science of Tsavo's lions.

Right: Terrace level of the new Collections Resource Center.



B.D. PATTERSON

SCOTT DEMEL

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field*, call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Cover: *Splendors of China's Forbidden City* will be at The Field Museum March 12 through Sept. 12, 2004. Emperor Qianlong in formal court robe, detail (1736). ©Palace Museum, Beijing.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

1400 South Lake Shore Drive
Chicago, IL 60605-2496
312.922.9410
www.fieldmuseum.org

©PALACE MUSEUM, BEIJING

WILLIAM BURGER

ERIC A. RICKART

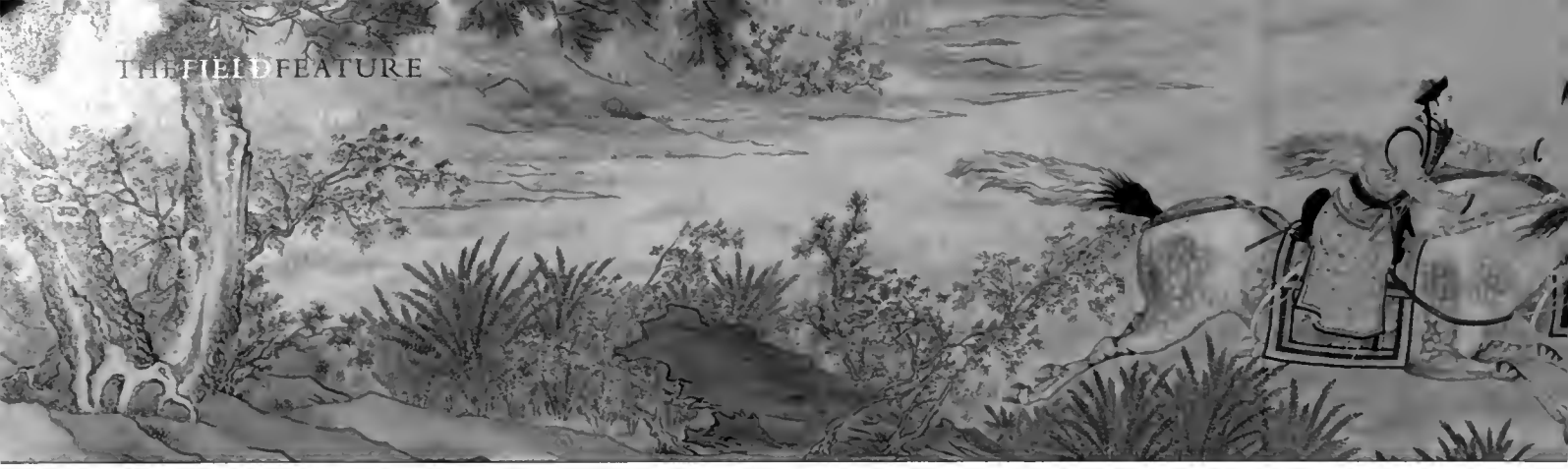
Correction: In the *Einstein* quiz on the front page of the Winter 2003–2004 calendar, Sen. Joseph McCarthy was incorrectly identified as the head of the House Committee on Un-American Activities.

Museum Campus Neighbors

Shedd Aquarium Imagine a birthday celebration with more than 19,000 party animals. It's yours at Shedd Aquarium. Arrange a party for a child or an adult, with catering, a visit from a costumed character and an activity. Then spend the rest of the day at the aquarium with family, friends and Shedd's fabulous animals. Really want to get your feet wet? Try the new Trainer for a Day program, beginning in April. Follow a marine mammal trainer as he or she prepares food, feeds the animals and conducts a training session.

For details and registration information about either program, visit **www.sheddaquarium.org.**

Adler Planetarium As part of the Adler's coverage on the Mars Rover mission, see a full-scale replica of the spacecraft through April. In *The Future is Wild*, scientists' forecasts help you imagine Earth millions of years from now, when the continents have shifted, mass extinctions have occurred and new species—such as fire-breathing birds—dominate the planet. And on Friday and Saturday nights beginning in March, *Sonic Vision* transforms alternative rock and techno music into neo-psychedelic animation on the StarRider's dome. It's a mind-bending, pulsing ride with such artists as Radiohead, Goldfrapp, U2, David Bowie and the Flaming Lips. Visit **www.adlerplanetarium.org** or call **312.922.STAR.**



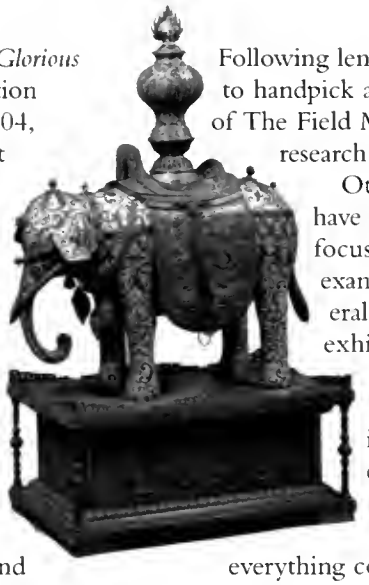
New Exhibition Gives Unprecedented Look at 18th Century Imperial China

Amy E. Cranch, Editor
All images © Palace Museum, Beijing

It was the largest empire the country has ever known, stretching from the Siberian forests to the South China Sea, and from the mountains of Tajikistan to Sakhalin north of Japan. Its resources—gold and jade, rice and silk, livestock, land and priceless art—made it richer than all of Europe combined. And at its zenith, one man held absolute power for 60 years over 300 million subjects. This was China in the 18th century, under the emperor known as Qianlong (cheeyen-loong).

Above: The Emperor Qianlong hunting deer, assisted by Rongfei, one of his wives (ca. 1760).

Right: Elephant of cloisonné on gilded bronze (1746).



Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong, a new exhibition running March 12 through Sept. 12, 2004, opens the door to the final, magnificent flowering of Imperial China and the man who guided its growth. To create the exhibition, The Field Museum borrowed nearly 400 treasures from Beijing's Palace Museum, formerly called the Forbidden City, a 178-acre walled complex that was the symbolic heart of the Chinese empire. Most of the objects have never been seen in the United States, and many have never traveled outside of the palace compound. "Exelon Corporation is pleased to support this remarkable exhibition and help bring it to Chicago," said John Rowe, Exelon chairman and a Field Museum trustee.

The idea for *Splendors of China's Forbidden City* was born when Sophia Siskel, now vice president of exhibitions and education, and anthropology curators Chuimei Ho and Bennet Bronson were in China preparing for last year's *Pearls* exhibition. Following lengthy negotiations and several trips to handpick and prepare the objects, it is proof of The Field Museum's superior knack for both research and exhibitions.

Other Forbidden City exhibitions have either been highly specialized—focusing on jade or calligraphy, for example—or "provided a good general overview," said Ho, the exhibition's lead curator. "We thought American audiences were ready for something more focused and in-depth— and at the same time engaging and beautiful." The exhibition deals with a relatively recent time, 1736 to 1795, and everything connects to one extraordinary man.

A wise and learned leader

Any discussion of Qianlong must first recognize that he was a Manchu, an ethnic minority, ruling over the Han Chinese majority. Yet he deftly intertwined both cultures into his personal and political life, incorporating Han Chinese symbols and colors into almost everything he touched, including his clothes, dishes and cushions. In one suggested palace environment, you will see his gold-lacquered throne featuring the five-clawed dragon, an ancient Han imperial symbol reserved exclusively for the emperor.

To successfully rule the vast empire, Qianlong had to excel across the board, from tireless bureaucrat to hands-on administrator, and from expert

Enhance your exhibition experience with these offerings. Rent the audio tour, available in an adult or family version. Look in the calendar for related family and adult programs. Purchase the companion book, written and edited by the exhibition's curators and co-published by Merrell Publishers, with contributions from other Qianlong scholars. Or shop for exquisite items, including antique tables and trunks and jade ceremonial objects and jewelry, all carefully chosen and brought from China especially for The Field Museum.

huntsman to dedicated scholar and arts connoisseur. "Qianlong was groomed from an early age to be a great leader," said Francesca Pons, the exhibition's project administrator. "His well-rounded abilities helped China become the most powerful empire in the world at that time."

Splendors of China's Forbidden City examines keys to his accomplishments: his tours to review public works and offer tax relief; his relationship with other leaders; and his support and personal exploration in all of the empire's languages and religions. You will also see the tools of his talents, including his writing desk, calligraphy brushes and weapons.

Infinitely inquisitive, Qianlong also cultivated his artistic interests. He assembled massive collections and commissioned radical new works for his time, while making notable efforts, such as writing essays or creating catalogues, to understand the objects' cultural context. Bronson, the exhibition's co-curator, said Qianlong may be the greatest collector who has ever lived: His collections form the bulk of objects in China's two major state museums. The exhibition features selections from his jade, snuff bottle and pottery collections. Such ventures backed his personal passions while proving that he was a superior ruler learned in all things.

A world of women

One tender aspect of Qianlong's life is his relationship with Xiaoxian *(sheeyow-sheeyen)*, his first wife and empress. Married as teens, they fell deeply in love over the years. Tragically, she died at 33. Although Qianlong had more than 40 wives and hundreds of court ladies and maidservants, none held the same place in his heart.

Qianlong seems to have thought it was important that women be smart and fit. The famous painting above, attributed to Jesuit artist Giuseppe Castiglione, shows the emperor hunting deer with one of his wives. Yet most of the time, the women lived in small, closed areas, largely secluded from the rest of the world. To ensure a pure bloodline, no men—besides Qianlong and the palace eunuchs—could stay the night. Once married to the emperor, the women could never again live outside of the complex. They could accept visitors and travel with permission, and often visited the summer palace for its gardens, festivals, market and other activities.

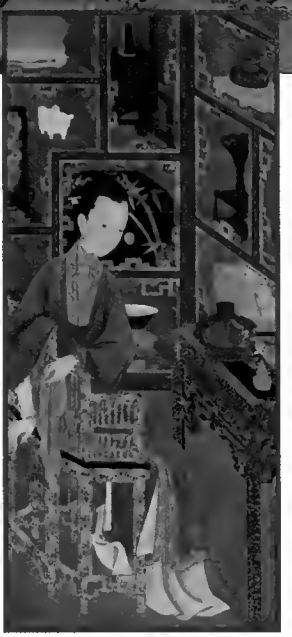
One painting of a court lady surrounded by exquisite objects conveys the luxury—and isolation—many women must have felt. The exhibition developers have recreated this scene, using objects thought to be the ones in the painting. But, as in the Forbidden City, you cannot enter her chamber. You can only peer through a window and imagine her loneliness amidst the opulence.

Faith in the Forbidden City

Whether as a benefactor or practitioner, Qianlong supported many religions. The exhibition features four religions practiced inside the palace walls—Tibetan Buddhism, Han Buddhism, Shamanism and Daoism. Ritual objects on view include mirrors, altars, musical instruments and representations of deities, such as statues, a tangka painting and stupas, or spire-like monuments that often contain holy relics. Visitors will encounter a bronze statue of the ferocious Yamantaka, "Slayer of the Lord of Death," and an outstanding gold statue of Guanyin, goddess of mercy.

Qianlong voluntarily stepped down from the throne in 1795. When he died four years later, the empire had already begun to lose its splendor. The exhibition concludes with Qianlong's memorial throne, a tablet said to enshrine his spirit and offering vessels. None of these has ever been publicly displayed, even in the Palace Museum. They are presented as a silent gesture of honor for this man—artist, poet, scholar, warrior and ruler—who, with his father and grandfather, catapulted Imperial China to its greatest size and power. Following a century of turmoil, China reestablished itself in the 20th century, but the glorious reign of China's emperors had ended forever. **ITF**

Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong was developed by The Field Museum in cooperation with the Palace Museum, Beijing.



Above: A court lady at leisure (early 18th century).

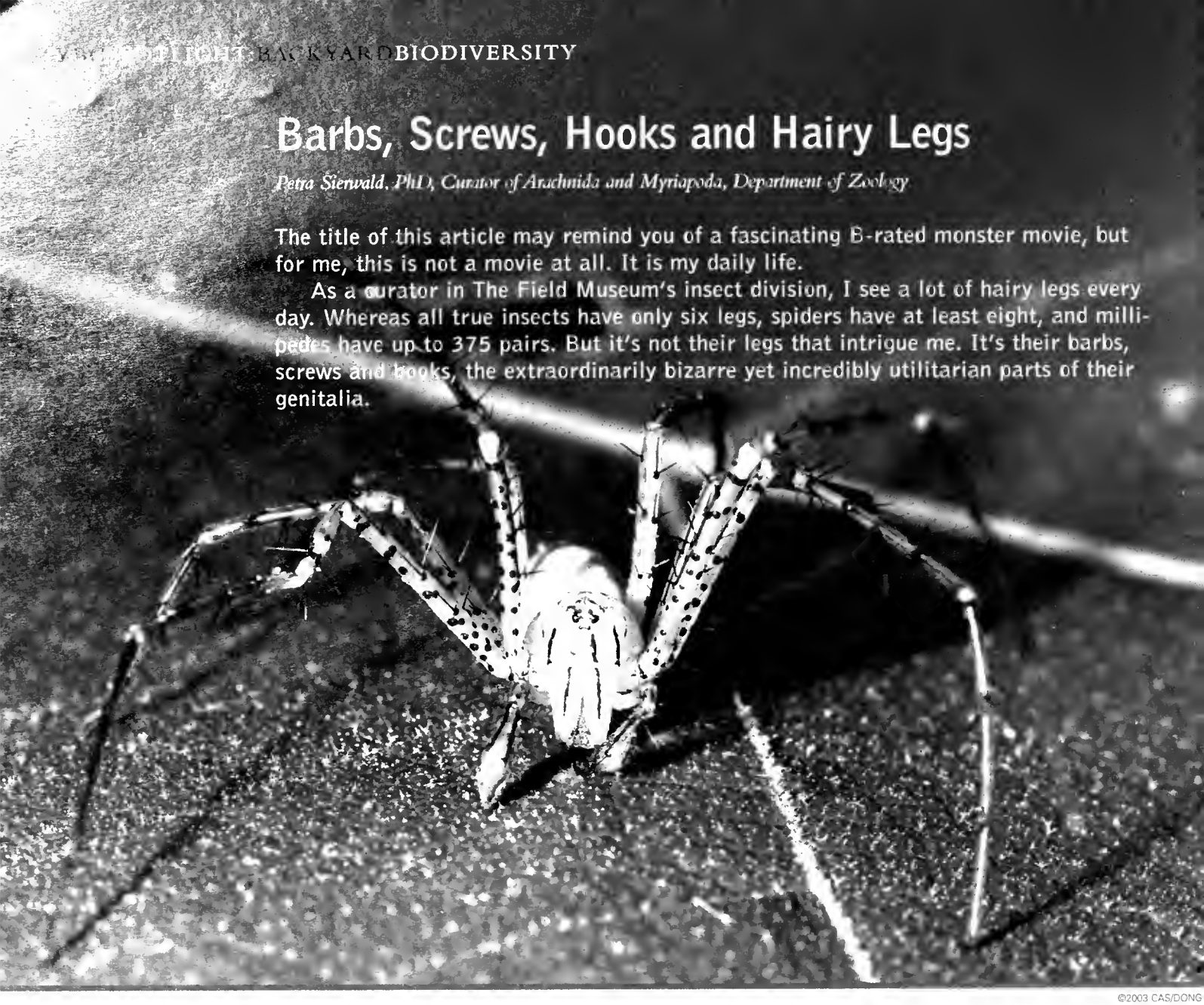
Left: Gold statue of seated four-armed Guanyin, goddess of mercy (1748).

Barbs, Screws, Hooks and Hairy Legs

Petra Sierwald, PhD, Curator of Arachnida and Myriapoda, Department of Zoology

The title of this article may remind you of a fascinating B-rated monster movie, but for me, this is not a movie at all. It is my daily life.

As a curator in The Field Museum's insect division, I see a lot of hairy legs every day. Whereas all true insects have only six legs, spiders have at least eight, and millipedes have up to 375 pairs. But it's not their legs that intrigue me. It's their barbs, screws and hooks, the extraordinarily bizarre yet incredibly utilitarian parts of their genitalia.



Above: This colorful lynx spider from Myanmar has not yet been identified.

Below: This millipede's (Sigmoria sp.) *striking color warns others of the nasty chemicals it exudes.*

All spiders have a pair of "hands" next to their mouthparts called palps that handle prey and silk threads. In full grown males, though, these palps contain extremely complex organs that transfer sperm to the female receptacles—a function that is still mysterious in many ways. The male produces a small triangular sperm web, then releases sperm from his hind body onto the web. He dips his palps into the seminal fluid to extricate the sperm. He then inserts them, with their hooks or other tool-like structures, into hoods and nooks in front of the sperm receptacles on the female's belly. She stores the sperm and determines when her eggs will become fertilized based on such conditions as weather and the availability of food and an ideal nesting spot.

A perfect fit

You may wonder why the love lives of spiders fascinate me. It is exciting when males sometimes get eaten or females sometimes become wrapped up in silk. But their cannibalistic nature is highly exaggerated. I studied North America's five widow spiders. Most males do not get eaten, and some female species even share her dinner.

My primary interest is in using genitalia to identify species. Early research used spiders' shape and color in identification, which was often incomplete or incorrect. But incredibly, we now know, each species—male and female—has a different set of genitalia. With 37,000 known spider species, that's 74,000 sets of exclusive genitalia! Not only does a male have to find a female with whom he perfectly fits in order to reproduce, but scientists have to differentiate between all genitalia to identify spiders to species level.

In one species of fish-eating spiders from Africa,

the male genitalia carry a hook that engages in a small but deep pit in the female genitalia. In another closely related species, the tip of the hook is large and shaped like a hammer. Accordingly, the female has large pouches to accommodate the male's organ.

Technology lightens the load

It is impossible for me—or any researcher—to memorize the minuscule, detailed genital structures for 37,000 species. Historically, highly trained illustrators created images while looking through a microscope. While illustrations are still a core piece of the identification puzzle, technology is enabling us to see these structures to acute levels of detail. We are fortunate at The Field Museum to have several superior laboratories.

The Field Museum's scanning electron microscope (SEM) gets a lot of use, and we can now make digital images through our light microscopes. We also compare the specimens we collect with the Museum's collection of about 20,000 specimens. With so many species and such fine detail, it is not surprising that we know very little about the spider, millipede or beetle species right here in Cook County, much less understudied parts of the world.

Field Museum curators travel to these unexplored places to add to our collections and to determine the species diversity of habitats under consideration for protection. Collecting techniques can range from setting up mass traps to roaming around on our hands and knees, negotiating with the birds and snakes as to who gets the spider!

We worked with Burmese students and members of the forestry department on a recent collecting fieldtrip to Myanmar (Burma) in Southeast Asia, where spiders are everywhere. I collected in rice fields for the first time and saw more spiders there than I have ever experienced. Spiders hunt on the water surface between the rice plants, build webs among the rice leaves and run up and down the rice plants in search of food. In fact, they protect the rice from insect crop pests and are vital to keeping the fields productive.

Misunderstood millipedes

About six years ago, I began working on those strange, slow-moving worms with legs—millipedes. Less dynamic than their spider counterparts, most millipedes root around for rotten leaves in the dark of night. Deciduous forests would drown in their own leaf litter if it weren't for millipedes eating their way through the debris. Yet their cryptic nature has detracted enthusiasts from studying them, leaving our knowledge of millipedes far behind other groups. We don't know how many species have been described and have little idea about who lives in our backyards and what they are doing there.

©2003 CAS/ DONG LIN

Above: Collecting in Myanmar was wet, muddy and faced with snakes and leeches.

About 10 years ago, the American National Science Foundation began pushing for research on neglected organism groups. At that time, there were only five known millipede researchers in the world. When I heard about the program, I discovered that The Field Museum had a large and wonderful, albeit dormant, collection. What a grand declaration of building and maintaining collections over time, as you never know when information will be needed for urgent research.

While looking at the collection, I noticed that the males had converted the legs of their seventh ring into fantastic sperm transfer organs called gonopods. These organs motivated a new field of study. Since then, we have trained new graduate students to specialize on millipedes. In an effort to replenish the vanishing scientific expertise, we have produced catalogs of all existing millipede collections in the world and computerized the Museum's collections. We are now creating a catalog of all millipede species ever described. Several students and volunteers have supported this task—impossible to do without them.

Of course, many millipede species await discovery, which will be much easier to find once we know what has already been described. Like a road being built to reach a destination faster, we are improving the scientific infrastructure for describing millipedes and their important ecological role in our world's forests. **TF**

Left: Illustration of male spider genitalia, the most complex sexual organs in the animal kingdom.

Right: Scanning electron image of the outside of female spider genitalia.

Greener Spaces for Home and Work

Tiffany Plate, Writer

Ever wonder how environmentally friendly your home and workplace are? Find out in April, when The Field Museum hosts a symposium on "green" building and home care.

What is green architecture?

Developers, architects and builders are just catching on to how to reduce waste, conserve natural resources and improve air quality through their projects. The U.S. Green Building Council promotes buildings that are environmentally responsible, profitable and healthy for living and working. Through the Leadership in Energy and Environmental Design (LEED) rating system, buildings can be certified silver, gold or platinum based on their inclusion of green attributes.

COURTESY SERENA STURM ARCHITECTS

DOUG SNOWER PHOTOGRAPHY

Top: The Tuthill building resides on restored lands and is constructed of environmentally friendly materials.

Bottom: Rooftop sedum on this house by EHDD Architecture absorbs storm water runoff.

Because LEED is rather new and involves lengthy documentation, relatively few buildings are certified. The Chicago Center for Green Technology, for example, is the only platinum site in Chicago. Credit-earning features include: the site's proximity to public transportation; use of low-emitting paints, carpets and adhesives; storage space and shower facilities for bicyclists; renewable energy systems; water-efficient landscaping; and use of sustainable wood or recycled materials.

Though adapting to different building practices and certification can be time consuming, green architecture is on the rise. Government incentives are increasing, and long-term energy and cost savings are becoming better understood. Above all, rewards such as fewer toxins and more green space contribute to healthier, more productive and, ultimately, happier humans.

How The Field Museum stacks up

One way the Museum can promote environmentally forward thinking is to talk about what we are doing to conserve the Earth's resources. To date, we have installed 98 of 250 photovoltaic cells, or PV cell panels, on the Museum's roof that convert the sun's energy to usable electricity. A new central plant contains energy-efficient heating boilers and ice machines working overnight to help offset high costs during periods of peak demand. The Museum's 600-person staff vigorously recycles paper, cardboard, packing materials, aluminum and glass. We purchase recycled office supplies, and provide storage and shower facilities for employees who bike to work. On your next visit, look for signage supported by the Illinois Clean Energy Community Foundation on our latest environmental initiatives.

What's inside counts, too

A building's environmentally friendly "shell" is only the first step. Barry Bursak, an environmental consultant, promotes eco-friendly home furnishings. "There are non-toxic, environmentally sustainable home furnishings being manufactured on a small grassroots level," said Bursak. Vendors are creating products that use sustainably grown wood, plant-based finishes, organic cotton and hemp fabrics, and non-toxic, animal-free glues.

While not always easy to find or afford, more products are becoming increasingly available, especially as consumers become educated and retailers understand that the public is looking for them. "Every time people consider buying home furnishings, they should ask what the products are made of, if they contain volatile organic compounds such as formaldehyde, and if the wood came from a managed forest," said Bursak.

PV cell panels may not be feasible for everyone, but we can all make small changes in our daily lives, whether through properly insulating our homes or purchasing chemical-free cleansers. To learn more, hear prominent building engineer Guy Battle speak on April 22, or attend the Green Architecture Symposium on April 23. Also stop by the Eco-Friendly Homes Fair on April 24 from 9am to 4pm. See the calendar for details. ITF

Green Chicago was organized in collaboration with the Chicago Architecture Foundation and in partnership with AIA Chicago, and is presented with generous support from the Illinois Clean Energy Foundation.

Bird Beak Bungle

© KYRA MILLSAPS

JOHN WEINSTEIN/294391.10D

Left: Finches from the Museum's collections.

Inset: Domed nests are characteristic of Darwin's finches and their relatives.

They're as famous as Pavlov's dogs and Freudian slips. Darwin's finches, a flagship in understanding evolution, include an estimated 13 to 14 species in the Galapagos Islands and one on Cocos Island off the Pacific coast of Central America. Although similar in body size and coloring, some bills look like short, thick cones, suitable for cracking seeds, while others resemble a sliver of the moon, adapted to probing for insects.

Biologists presumed for years that Darwin's finches descended from a South American species. Yet no rigorous studies had been done to substantiate that. Shannon Hackett, PhD, a curator in the Museum's bird division, and two colleagues began asking where the finches came from and how such beak diversity arose.

Dr. Hackett's team used traditional methods, such as measuring bills, combined with DNA sequencing and powerful computer analyses. Most importantly, they gathered data from a broad range of songbird species. They discovered, among many things, that Darwin's finches are closely related to a group whose distributions are centered mainly in the Caribbean—not simply the long-accepted South American connection.

Surprisingly, they also found that the Caribbean relatives exhibited even greater bill diversity than Darwin's finches and had been inaccurately classified into three separate avian families. While the Galapagos have long been considered a prime laboratory for natural selection, the inherent potential of this songbird group to generate remarkably different bills appears not just in the Galapagos, but in the previously unrecognized Caribbean radiation as well.

Even when we think we know a lot, new findings can ruffle the proverbial feathers. Dr. Hackett's team altered centuries-old assumptions about the origins of Darwin's finches, while igniting further exploration into bill size, shape and function.

Dr. Hackett will lecture on May 15 at 2:30pm about Tree of Life, an international project to determine the relationships among all of Earth's species. She directs the avian segment.

Remarkable Rats and the Origins of Island Biological Diversity

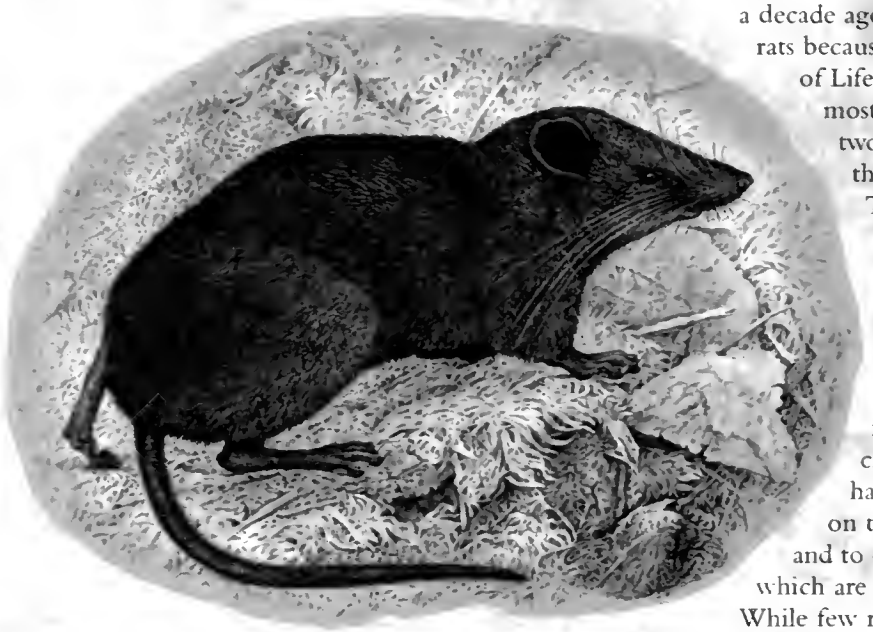
Laurence R. Heaney, Curator of Mammals, Department of Zoology
Illustrations by Velizar Simeonovski

Biologists are an odd lot—we often get intensely excited about things that leave other people shaking their heads. Who else would spend one to two months each year in remote tropical mountain ranges, eagerly racing at dawn through fog-shrouded forest to see what beautiful rats were caught in their traps overnight?

"What's that?" you might ask. "Did you say 'beautiful rats?' They stink, they're filthy, they carry disease and they do massive damage! Surely you mean beautiful birds or butterflies!" But the rats of the Philippines are marvelous, and are a wonderful example of how biological diversity is produced. There are at least 60 species, 58 of which live nowhere else, and most of them look nothing like anyone's typical image of a rat.

Luzon shrew-mouse, Archboldomys musseri.

For at least 200 years, even before Charles Darwin's famous visit to the Galapagos Islands, scientists have known that oceanic islands usually have unique—often bizarre—plant and animal species. Oceanic islands are those that have had



no dry-land connection to a continent. When a small animal or plant population reaches a group of oceanic islands, it finds itself with abundant resources and few or no competitors or predators. Over millions of years, the original species increases from one to many, evolving in response to the available (and often unusual) resources. A classic example to illustrate this process, called adaptive radiation, has emerged from our studies of the weird and wonderful rodents of the Philippines.

Branches on the Tree of Life

Scientists classify species based on their position in the Tree of Life. For more than 20 years, my American and Filipino collaborators and I have been working to understand why the Philippine archipelago has unusually large numbers of unique species with distinctive ways of making a living. Our recent DNA studies have confirmed what we tentatively suggested from anatomical studies a decade ago: all 60 known species are technically rats because they are on that branch of the Tree of Life. But the DNA data also show us that most of the 60 species are members of just two groups (or two complete "branches") that are confined to the Philippines. They are the descendents of two different ancestral populations that originally came from the Asian mainland 10 to 12 million years ago.

Most members of one group, which includes about 25 species, live in the extremely wet forest high in the mountains. Though they are closely related, the only things they have in common are a tendency to live on the ground, to have fairly short tails and to eat very little other than earthworms, which are tremendously abundant in the area. While few rat species elsewhere in the world eat earthworms, all 25 members of this group have evolved ways to effectively use this abundant resource.

One Luzon species, which we informally call the tweezer-beaked hopping rat, hops along trails that it clears through the moss and pounces on worms at the surface, mostly at night. In the same forest, the Luzon striped shrew-rat digs for worms through the thick layer of decomposing moss and leaves. A small mouse about the size of a Chicago shrew flits from one log to another during the daytime, in search of worms along the edges of fallen logs. Several species that look like the wild mice of American forests climb more actively. Most amazingly, our DNA data tell us that all of

these are closely related and are descended from one ancestral population that reached the Philippines from the Asian mainland about 10 million years ago.

One day in early 2003, in the high, wet, cool mountains of northern Luzon, a local hunter we had trained as a field assistant returned to our camp, his face lit with triumph. After weeks of effort, he had caught a dwarf cloud rat that was high in a tree cloaked with moss, orchids, and ferns, and woven into the canopy in a web of vines. While we had seen the few existing museum specimens, nothing prepared us for its thick, lustrous pelage, nicely rounded face and furry tail. We could scarcely believe its broad hind feet with "big toes" that were as flexible as human thumbs. No wonder no one had caught one in five decades: It seems perfectly adapted to living high in the canopy, with two pairs of "hands" and soft, dense fur that sheds water from the frequent thick fog.

This animal belongs to a second group of about 15 species descended from an Asian colonist that reached the Philippines about 12 million years ago. Most live in the treetops, feed on tender, young leaves and some seeds and fruit, and have long, thick fur covering the body and tail. Several species of giant cloud rats weigh up to 7 pounds. In many ways, this group seems to be the ecological equivalent of some African and South American monkeys.

Thus, from just two successful movements of a few rats from the Asian mainland, about 40 species have evolved, from tiny shrew-like animals to large arboreal herbivores.

The birth of diversity

The history of life on Earth, and especially the increase in biological diversity, is intimately tied to geological history. The Philippine Islands originated in the Pacific Ocean, first popping above water far from land, and have never been connected to the mainland (except for one island near Borneo). The islands are of vastly different ages, from 300,000 to 20 million years old. While some of the current islands were once connected to one another, most have never been connected to anyplace, even though they are often separated by 20 miles or less. We have found that each isolated island is a unique center of biological diversity. For example, about 80 percent of the small mammal species on Luzon Island live nowhere else on Earth. Thus, it's clear that an island's isolation promotes the development of unique species.

The fact that closely related species usually live on nearby islands clearly shows that they occasionally move between islands. We believe this happens during typhoons, when rarely—but inevitably—a few animals inside a hollow log are swept out to sea and blown by strong winds to a nearby island. In response to different resources, predators and competitors, the anatomy, behavior and genes of the isolated population change, eventually becoming a new species on the new island. Our latest DNA studies show that a given species' age is often within a few hundred thousand

Above: Luzon striped shrew-rat, Chrotomys whiteheadi.

Below: Tweezer-beaked hopping rat, Rhynchomys soricoides.

BACKGROUND IMAGE: ERIC A. RICKART

years of the island's age—a small difference in geological time. In other words, our weird and wonderful rats caught a ride on a log to each new island shortly after it surfaced above the sea.

Sometimes these new species stayed on their new island, but sometimes a few caught a log back to the original island, increasing the number there from one to two, and eventually more. Over the 10 to 12 million years that rats have been in the Philippines, the number of species on Luzon has increased from the original two to 13 in the earthworm specialist group and seven in the arboreal leaf-eater group (plus about five that arrived separately from Asia). The same holds true for the other islands, totaling to 58 unique species.

And so it becomes apparent why oceanic islands have such large concentrations of rare biological diversity: It is the seemingly inevitable result of a geological setting interacting with organisms' tendency to undergo genetic change over time when they are isolated. With new methods of DNA analysis, we can study this at a level of detail never imagined by Darwin, while still addressing what he referred to as that mystery of mysteries—the origins of species. ITF

Dwarf cloud rat, Carpomys phaeurus, *and its flexible hind foot adapted to living high in the canopy.*

Act II: James Simpson Theatre

Following a five-month intermission, the curtains are being pulled back on the James Simpson Theatre to reveal a brand new set. New seats, increased accessibility and updated acoustics make this the premier venue for special events at The Field Museum. Refurbishing James Simpson Theatre was made possible through generous support from The Simpson Family and The Buehler Family Foundation, in addition to gifts from friends of the Museum.

Since the 1920s, the historic theater has welcomed school groups, businesses, scientists and Museum friends for an array of events. But its decades-old seats and equipment required renovation. The Museum will celebrate the theater's reopening in March with the *National Geographic Live!* lecture series. (See the calendar for details.)

The revitalized space has a new handicapped entry at the rear and an updated lift at the stage. New seats provide greater comfort and easier access in and out of the rows. The center aisle has been widened and handicapped seating added, and a crossover aisle has been created for further accessibility and flexible crowd circulation. An upgraded sound system allows for better control and enhanced acoustics. An additional control booth improves the theater's video projection capabilities. Box seats have been installed in the balcony, which was previously unused.

The new theater, along with the adjacent west lobby, lecture halls and classrooms, is the ideal center for conferences and events. Institutions can hold a general session for 700 guests, and then use surrounding rooms for breakout sessions. The Museum's approved caterer list offers a range of food and beverage choices, from continental breakfasts to boxed lunches to a formal dinner in Stanley Field Hall. Call the special events department at 312.665.7600 to rent Simpson Theatre for your next big event.

Planned Giving—Reaching Our Goals Together

Introduced to American philanthropy in the late 1960s, planned giving has become a cornerstone of support for nonprofit institutions.

Planned gifts, which range from straightforward wills to sophisticated trusts, offer many advantages to both the donor and the recipient, from providing you with income and significant tax benefits to helping ensure that your institution of choice fulfills its mission for years to come. Above all, planned gifts can be tailored to meet your family's individual financial situation and philanthropic goals.

There are numerous vehicles and combinations that allow you to construct your gift plan, including outright gifts, outright bequests, appreciated stock, insurance policies, charitable gift annuities and charitable lead trusts.

Whatever aspects of The Field Museum you are interested in supporting, we encourage one-on-one conversations to help you build a plan. Friends who include the Museum in their estate plans are recognized through the Edward E. Ayer Society, whose namesake was the Museum's first president.

Thank you to those who already support The Field Museum through planned giving. If you are interested in designating the Museum as a beneficiary, please contact Steve Hines, director of planned giving, at 312.665.7775 or shines@fmnh.org. Hines will work with you and your legal and tax advisors to help you make a gift that you may not have imagined possible.

New Light Cast on Hall of Jades

"Yes, it's dark in here," a sign outside of the *Hall of Jades* read. Last renovated in the early 1970s, the gallery's deteriorating lighting conditions left visitors not only frustrated, but unaware that its beautiful jade collection is one of the best in North America.

The renovated *Hall of Jades,* opening on March 12, presents more than 450 artifacts from China's long and distinguished history. It features fiber optic lighting, an elegant, tranquil setting and a more lucid storyline that incorporates contemporary jade scholarship.

While many museums' jade holdings cover one or two periods, The Field Museum's *Hall of Jades* highlights 6,000 years and relates the artifacts to the times and cultures from which they originate. Visitors will first learn about jade mineralogy, how the stone is ground and its meanings in other cultures. Then they will move from Neolithic burial sites; through the Bronze Age and formation of the Chinese empire; through centuries of powerful dynasties; to the early 20th century.

In the Neolithic section, carefully carved objects, such as ceremonial weapons and disks with holes called *bi* (bee), were buried with the dead. Jade later became an unmistakable display of power and wealth. Visitors will see the footplate of a wealthy person's full-body jade burial suit from the Han period (206 BC–AD 220). As dynasties flourished and fell over the next 14 centuries, more styles and functions of jade objects evolved, including vessels, personal accessories and animal figurines. During the Qing Dynasty (1644–1911), jade artistry achieved new heights. The gallery includes bells, flutes and other musical instruments, as well as intricate desktop items that held special meaning for educated men. A 281-pound jar carved from a single boulder once stood in Beijing's Imperial Palace during the reign of Emperor Qianlong.

Detail from Qing period (1644–1911) desk screen.

The Museum has created a fitting home for its important collection. Stop by after your visit to *Splendors of China's Forbidden City*, and discover why jade is China's most enduring symbol of prosperity, power and virtue.

The Creatures of Mazon Creek

David Dolak, Instructor, Department of Education, and Volunteer, Department of Geology

As Chicago settled into its annual deep freeze, I smiled with confidence that the season would soon change. But during the Pennsylvanian Period 300 million years ago, today's northern Illinois was a tropical swamp astride the equator, an alien world with giant ferns and mammoth dragonflies. One season—a perpetual hot, steamy summer—seared the senses.

Top: Dr. Eugene Richardson overlooking Pit 11.

Bottom: A reconstruction of Tully Monster.

The prehistoric life spread throughout The Field Museum captivated me as a child, particularly one fossil type—compact, beautiful impressions of plant and animal creatures from Mazon Creek, 50 miles southwest of Chicago. When my family visited this magical place, my siblings and I collected rocks, smashed our thumbs and stared at the glories that lay open before us.

Mazon Creek carves through a badland of abandoned coalmines. Extensive mining beginning in the 1860s yielded waste piles seeded with 300 million-year-old fossil jewels. The largest and last strip mine was Peabody Coal Company's Pit 11, which operated until the mid-1970s. The Mazon Creek area is a *lagerstatten*, a fossil mother load, and is ranked among a handful of sites around the world that are famous for their organism diversity and wondrous preservation.

Neatly pre-packaged in ironstone concretions that resemble flattened eggs, the fossils can be split into mirror-image halves. They are easy to spot as they erode out of the hillsides. Early fossil hunters would wade along the creek barefoot, feeling for smooth concretions with their feet!

The Field Museum's involvement with Mazon Creek began in the 1940s. By the 1960s, largely because of Eugene Richardson, PhD, curator of fossil invertebrates, the Museum was recognized as the preeminent repository of Mazon Creek fossils. The Museum conducted research at Pit 11 through the early 1980s. During the area's first systematic fossil census, which the Museum coordinated, dozens of buckets were stacked on the Museum's roof, taking advantage of Chicago's seasonal freeze-thaw cycles to aid in cracking the fossils open.

Dr. Richardson welcomed amateur collectors to share their discoveries. When I met him, he graciously assessed my unknown blobs and showed me how to identify them. I discovered that I was the proud owner of a jellyfish, sea cucumber and coprolite (fossil dung)!

About 100 plant species and more than 300 animal species have been identified from the Mazon area. At least 50 species have been named after local collectors, and an additional dozen species are named after scientists associated with The Field Museum. While perhaps less appealing than other prehistoric favorites, the preservation of soft-body organisms at Mazon, especially jellyfish, is without scientific comparison.

The most illustrious Mazon fossil is the Tully Monster *(Tullimonstrum gregarium)*, named after its discoverer, Francis Tully, a soft-spoken farmer-cum-collector. With a single-toothed jaw on one end, a tail and two fins on the other and two eyes that projected out sideways, this foot-long denizen of the swamp's marine bay is of uncertain lineage. It may not have been monstrous, or even sociable, but it is ours. It exists nowhere else on Earth, and was designated as Illinois' state fossil in 1991.

Mazon Creek's collecting heyday ended by the mid-1980s, but interest remains strong. Scientists worldwide continue to reference our 50,000 specimens, and the education department regularly offers family fieldtrips to old Pit 11. I invite you to come along, crack a few rocks and explore this ancient slice of northern Illinois.

See the calendar section for upcoming fieldtrips on March 20 and April 24.

New Exhibition's Private Viewings

Explore the hidden world of the Imperial Court in *Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong.*

Annual Fund Preview and Reception

Wednesday, March 10, 6:30 to 9:30pm

This wonderful private event includes a lecture by one of the exhibition's creators, along with light fare and educational activities. Reservations are required. Call 312.665.7777 for information.

Membership Previews

March 11 from 9am to 5pm and March 14, 18, 21 and 25 from 5 to 10pm. Reservations required. Call 866.312.2781 for information.

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Hotel Packages for Family and Friends

With convenient locations, wonderful amenities and a range of budget options, several Chicago hotels are offering special packages that include tickets to *Splendors of China's Forbidden City.* Below is a snapshot of participating partners. Check our website for further details.

Chicago's Essex Inn 800.621.6909	Holiday Inn Chicago City Centre 312.787.6100	Ritz Carlton 312.266.1000
Days Inn Lincoln Park North 888.LPN.DAYS	Hotel 71 800.621.4005	Swissôtel Chicago 312.565.0565
The Drake Hotel 312.787.2200	Park Hyatt Chicago 312.335.1234	Whitehall Hotel 312.944.6300

The Field Museum With Friends

Bring your alumni group, book club or special group of friends to see *Splendors of China's Forbidden City.* Discounted rates are available for 15 or more. Call the group sales office at 312.665.7300.

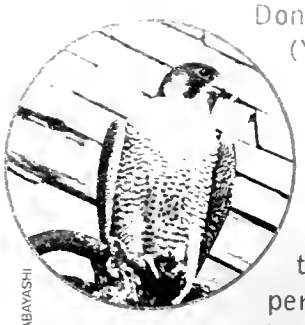
Choose from two jam-packed itineraries. *The Art of Chinese Jade* includes a visit to the newly renovated *Hall of Jades,* the Museum Store for its exquisite jade items, and Corner Bakery, where you can enjoy green tea and almond cookies. *China Immersion* includes your own docent and a walking tour of Chinatown to explore its old-world architecture and imperial-style restaurants.

2004 Membership Announcements

Field Museum members now have two phone numbers for member services. Call 866.312.2781 for all general questions about benefits or renewals. Call 312.665.7705 to reserve your free tickets to special exhibitions. Ticketmaster will no longer be providing this service.

In addition, due to rising operating costs, members will now be asked to pay $1 per item at the coat check.

Final Days of the YBC!



KANAE HIRABAYASHI

Don't miss the final days of the Year of Biodiversity and Conservation (YBC). See the calendar for programs on Asia, backyard biodiversity and the Tree of Life, or visit www.fieldmuseum.org/biodiversity.

Just added! Peregrine falcons, an endangered species in Illinois, are returning to Chicago's high-rise buildings to nest and raise their young. Mary Hennen, a Field Museum ornithologist and head of the Chicago Peregrine Program, leads a team that monitors their health and safety and bands the chicks for tracking. Because peregrines are near the top of the food chain, the cumulative effects of pesticides caused females to lay thin, fragile eggs that couldn't withstand the weight of incubation. Active monitoring programs are recovering populations throughout the United States. Though previously extirpated from Illinois, 10 breeding pairs lived here last year.

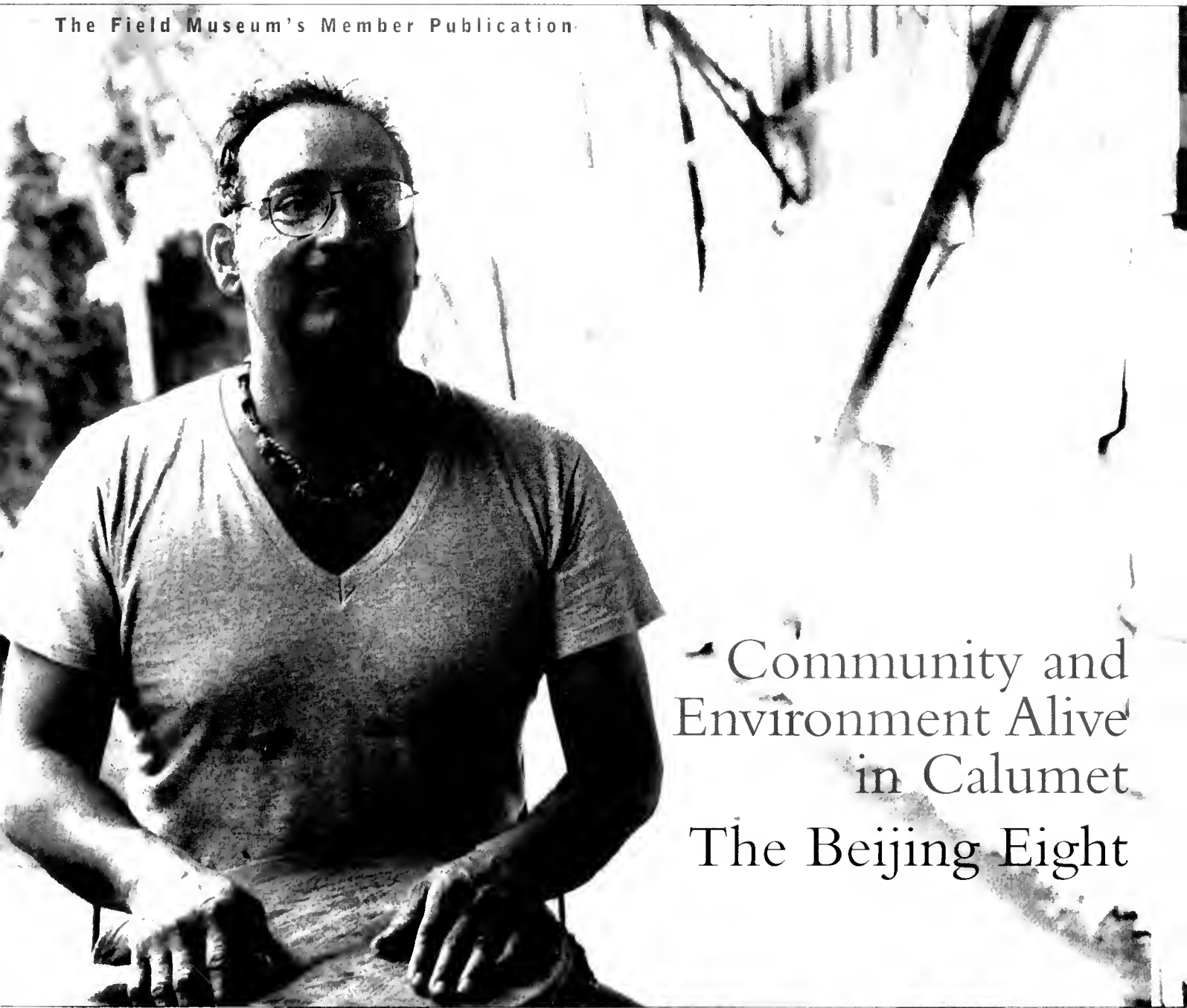
Witness the falcons in their nest from development through fledging. Email expeditions@fieldmuseum.org or visit www.fieldmuseum.org/expeditions to register for Hennen's first-hand accounts on the falcons' progress.

Above: An adult falcon nesting at the historic Uptown Theater.

INTHEFIELD

Summer 2004
June–August

The Field Museum's Member Publication



Community and Environment Alive in Calumet

The Beijing Eight

A Cool Place to Work

JOHN WEINSTEIN /GN88119.6

When Field Museum employees tell people where they work, the response is usually something like, "Cool. What's it like?" This issue of *In the Field* shares some real-life experiences our staff members have had. An ethnographer introduces us to Lake Calumet residents who are striving to revitalize their communities and the environment. An outreach educator describes a typical day teaching squeamish, curious school-children about soil and the life in it. Exhibition professionals convey their experiences in Beijing's Palace Museum preparing the objects you see in *Splendors of China's Forbidden City*. And there's more.

For me, each day is different, but here are six ingredients that characterize many of my days:

1. Start with a good breakfast: The "Breakfast Club" meets many mornings at McDonald's. (Remember Don McNeil, lighthearted host of the long-running radio and television show?) Curators and staff share the excitement of discovery, and the conversation occasionally deteriorates into a game of "Beat up the President!"

2. Small is beautiful: People are always amazed at how an institution so big—research activity in 90 countries, 22 million specimens, an extraordinary lineup of exhibitions, a grand Daniel Burnham classical building—can be so small. $59 million budget, 620 staff. The combination of complexity and intimacy makes this a fascinating workplace.

John McCarter joins Joanna McCaffrey to chart Lake Calumet's biological diversity, one activity among his duties as president.

JOHN WEINSTEIN/ GN90490 146D

3. Extramural: As soon as I realized that I brought no "value added" to the study of ichthyology or vertebrate paleontology, I went to work on deepening the Museum's presence and impact in Chicago's schools and ethnic neighborhoods, and securing governmental support.

4. It's not about the money: But it is. A mission to "Explore the Earth and its peoples," advanced laboratories and equipment, the deferred maintenance of a 1921 building, keeping up with new information technology, and large-scale exhibitions that share the wonders of the world and our collections with the public. All of these require immense capital, and anyone who does not love raising money should not be a museum director!

5. True believers: Our board of trustees has expanded from 35 to 60 members over the past decade. As new trustees grow to know this place, their enthusiasm becomes boundless, and working with them is a joy. Involving trustees, building on the range of talents and resources each one brings, is critical to the institution.

6. Intramural: Where else can you travel through the tales of a colleague from the depths of the Pacific Ocean to the reaches of the solar system? The scholarship of the scientist, the creativity of the exhibition designer, the patience of the conservator, the entrepreneurship of the administrator. Each person here provides an endless sense of knowledge and wonderment.

And these are my Chicago days. (My days in the field with curators—that's another story.) I hope to see you at the annual behind-the-scenes events on June 2, 3 and 4, when your family and friends can explore the private world of this Museum and meet some of the remarkable people I work with every day. If you can't make this anticipated tradition, please support our work with the enclosed gift envelope. Checkmark for point no. 4 above!

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field*, call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

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Cover: Residents of the Lake Calumet region are enlivening its sense of community and environment. Photos by Hannah Anderson.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

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Field Museum and Title IX Compliance

As an institution that provides education and training programs and receives financial assistance from federal agencies, in accordance with Title IX of the Education Amendments Act of 1972, we do not discriminate on the basis of sex in such programs. Should you have any questions, please contact our Title IX coordinator in the human resources department at 312.665.7271.

Museum Campus Neighbors

Museum Campus Museum Campus Free Week returns June 6 through 11. All three of our world-class museums—The Field Museum, Adler Planetarium and Shedd Aquarium—offer free general admission during the six-day kickoff to summer. Ticketed exhibitions and Sky Shows are available at a nominal additional fee.

Adler Planetarium Voyage through a Universe of excitement with astronomical exhibitions, up-to-date coverage of NASA events and Sky Theater and StarRider Theater shows. Travel to a future world of incredible beasts with *The Future is Wild*, or see music transformed into animation in Sonic Vision, playing on the weekends. Explore the cosmic mysteries of ancient Egypt in Stars of the Pharaohs, and learn about the Cassini mission to Saturn through special programs scheduled all summer long. For information call 312.922.STAR or visit www.adlerplanetarium.org

Shedd Aquarium Reach for the stars, and a lot of other cool animals, at Sea Star Quest. This new special exhibition opening June 17 is Shedd's most hands-on production ever. Kids will be able to high-five a live sea star, tickle a sea urchin's tube feet and meet more than 30 other species of tiny, spiny-skinned marine invertebrates at touch pools, child-height displays and a play station. See and do something everywhere you turn amid one of the most diverse collections of echinoderms in the world. For information, visit www.sheddaquarium.org.

Community and Environment Alive in Calumet

[illegible] Program Manager, Center for Cultural Understanding and Change

The hot summer sun beat down as we talked with Frank Ramos amid a surge of flowers near the Chicago Skyway overpass at 100th Street. Cars rushed overhead, and it was hard to breathe without inhaling their exhaust fumes. Sweat ran down my face and back as I jotted down notes to capture Frank's story—how a community garden came to be in such a seemingly unlikely place.

HILARY DEFCAMO

Families flock to Calumet Park to picnic and swim in Lake Michigan.

With time and effort, Frank and his wife, Magdalena, turned this unpromising patch of land in Chicago's East Side neighborhood into a lively oasis of ecology and community. Frank belongs to East Side Pride, one of many local organizations concerned with building community in the region. Having worked in the steel mills for more than 40 years, he says that his early retirement was due to associated health problems. He recalls when the mills were in full swing and says they often dumped toxic debris on land where homes now stand. He enjoys outdoor activities and nurturing something that's good for the neighborhood.

Thus is the story of the Lake Calumet region—a complex of industrial remnants, municipal waste sites, powerful personal histories, strong communities old and new, and some of the richest biological diversity in Northern Illinois. I was introduced to the region years previous, when I found myself driving through an area of Chicago that couldn't have been more dramatic. On one side of a thoroughfare laden with trucks was some of the last remaining heavy industry, and on the other side a wetland. Down the road, historic Pullman homes lured my imagination into another time and place.

To outsiders, as I had been, this is an area of paradox. Once one of the largest steel producers in the United States, the region has become a "rust-belt," "ghost town" or "armpit of the city" to some. To residents, however, seemingly disparate pieces of a puzzle come together to create home. Policy makers and funding agencies have identified the area for environmental and economic revitalization and have committed substantial funds—$34 million—toward that end.

I met Frank as part of an ethnographic research team investigating how local residents could be effectively engaged in reviving their communities, economy and environment. Whereas common social policy practices describe communities by their deficits, The Field Museum's Center for Cultural Understanding and Change (CCUC), with funding from the USDA Forest Service, identified Calumet's community strengths—or social assets—and how they are connected. We also examined what environment means to the residents and how they relate to it.

Social assets exist in all communities, but finding their core—the intangible relationships, values and ideas that helped create them—required ethnographic, qualitative research and analysis. From 2001 to 2003, under the direction of Dr. Alaka Wali, CCUC director and a curator in anthropology, I managed two-person teams of undergraduate and graduate interns who immersed themselves in the Chicago communities of South Deering, East Side, Pullman and Altgeld Gardens, and in Hammond, Indiana. They essentially "hung out" with the locals, but in a structured, systematic way called participant observation. This cornerstone method of ethnography helps us understand a place from the insiders' perspective, while translating this knowledge through our analytical outsiders' objectivity.

Social assets are the building blocks of community, the relationships that people create to address the needs of everyday life. We saw them every day, everywhere. At the area's waterways, where people flock to swim, fish and picnic ... at the Pullman Palace Car Company, where citizens are in "rescue

HILARY DEL CAMPO

East Side residents created a garden beneath the Chicago Skyway at 100th Street.

mode" to save the historic fabric of this fire-struck building ... at St. Kevin's Church in South Deering, known for bridging ethnic divides among its culturally diverse parishioners ... at the iconic Pierogi Fest in Hammond, where a man dressed up as a pierogi both pokes fun at the doughy pocket while celebrating it as a common connection for the area's Eastern European immigrants ... and through such people as Roman Villarreal, who leads a weekly drum circle in an old warehouse in Hammond ... and Hazel and Cheryl Johnson, a mother-daughter team in Altgeld Gardens who, after watching many people die of cancer, have been active in getting toxic sites cleaned up.

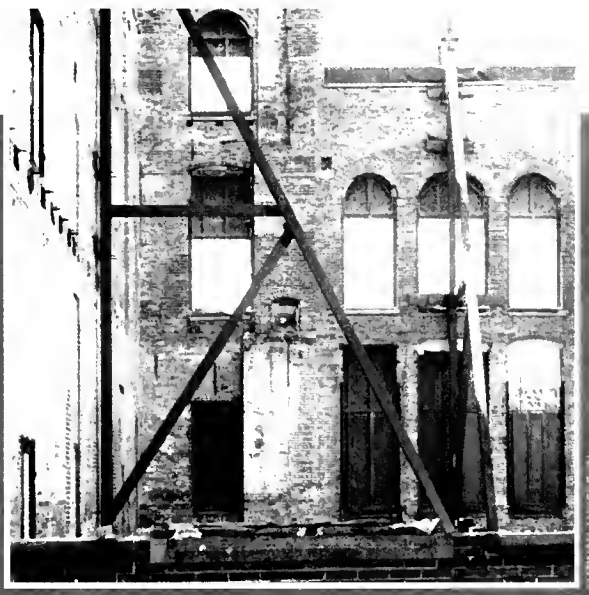
Our research also helped discern what environment means to the residents. For example, research interns Hilary del Campo and Ines Lagos, who both speak Spanish, celebrated Fourth of July at Calumet Park, a popular spot for Latino residents. As they roasted their tofu hotdogs, they solved a bit of a mystery. Local environmental activists are concerned about park patrons dumping their hot cooking coals next to the trees, which kills the roots, rather than in the assigned garbage cans. Hilary and Ines realized that since the park is typically filled to capacity with families with small children, hot coals at the base of a tree make it a visual marker of caution. Children can't see hot coals inside garbage cans, thus increasing the likelihood of a dangerous accident. Therefore, rather than specifically understanding that hot coals degrade the environment, families have a broader perception of environment that includes making choices based on health and safety.

These places, organizations, people and choices are the tip of the iceberg. For every social asset that's counted, layers of unseen strengths exist. And it is through people connecting that things are accomplished, organizations are formed, buildings are built, biodiversity is conserved, the environment is protected and community is strengthened.

Frank sat on an overturned crate in the shade of the Skyway and offered us a cold soda from his lunchbox. As I gratefully accepted, I could sense my perspective on the area shifting toward an insider's eyes. Frank shed light on a critical result of the study: Contrary to popular assumptions about Calumet being a dying or stagnant region, social assets abound, and the environment is integral to, not separate from, people's daily lives. **TF**

Visit www.fieldmuseum.org/calumet for a vibrant look at the study and communities. The Association of American Geographers awarded this site the best website of 2003.

HANNAH ANDERSON



HANNAH ANDERSON

Left: People play drums in this former industrial space.

Right: Residents are trying to save the historic fabric of the Pullman Palace Car Company, which was set on fire in 1998.

Another Piece of the Nolana Puzzle

Story and Photos by Michael Dillon, PhD, Curator and Head of Flowering Plants, Department of Botany

It was my first day in the Galápagos Islands alone. Rather than being greeted by my colleagues at the Charles Darwin Research Station (CDRS), I instead witnessed local fishermen setting bonfires and denying access to the facility. They were unhappy with the regulations that restrict commercial fishing of such delicacies as shark fins and lobsters in this heavily protected area. I was never able to enter the station during my field research, but I had longed for this opportunity too long to dismiss my pursuit of Nolana.

Perhaps no other place on Earth evokes the same emotions and questions among scientists as the Galápagos Islands. Serving as both a sanctuary and laboratory for studying animals and plants uniquely shaped by their isolation, the islands have inspired nearly 200 years of discovery since Charles Darwin's legendary voyage. While I had led three Field Museum tours to the Galápagos, my trip this past February, funded in part by Barb and Gene Schmitt and Sue and By Dickes, was for scientific business. My "official papers" included a *Convenio de Cooperación* from the CDRS and memorandum of understanding with Dr. Alan Tye, the station's head botanist. These papers gave me powers to wield my clippers on only three of the islands' nearly 650 species of flowering plants: *Nolana galapagensis* and its near relatives, *Lycium minimum* and *Grabowskia boerhaaviaefolia*. I knew what they looked like, and everything else was essentially off-limits.

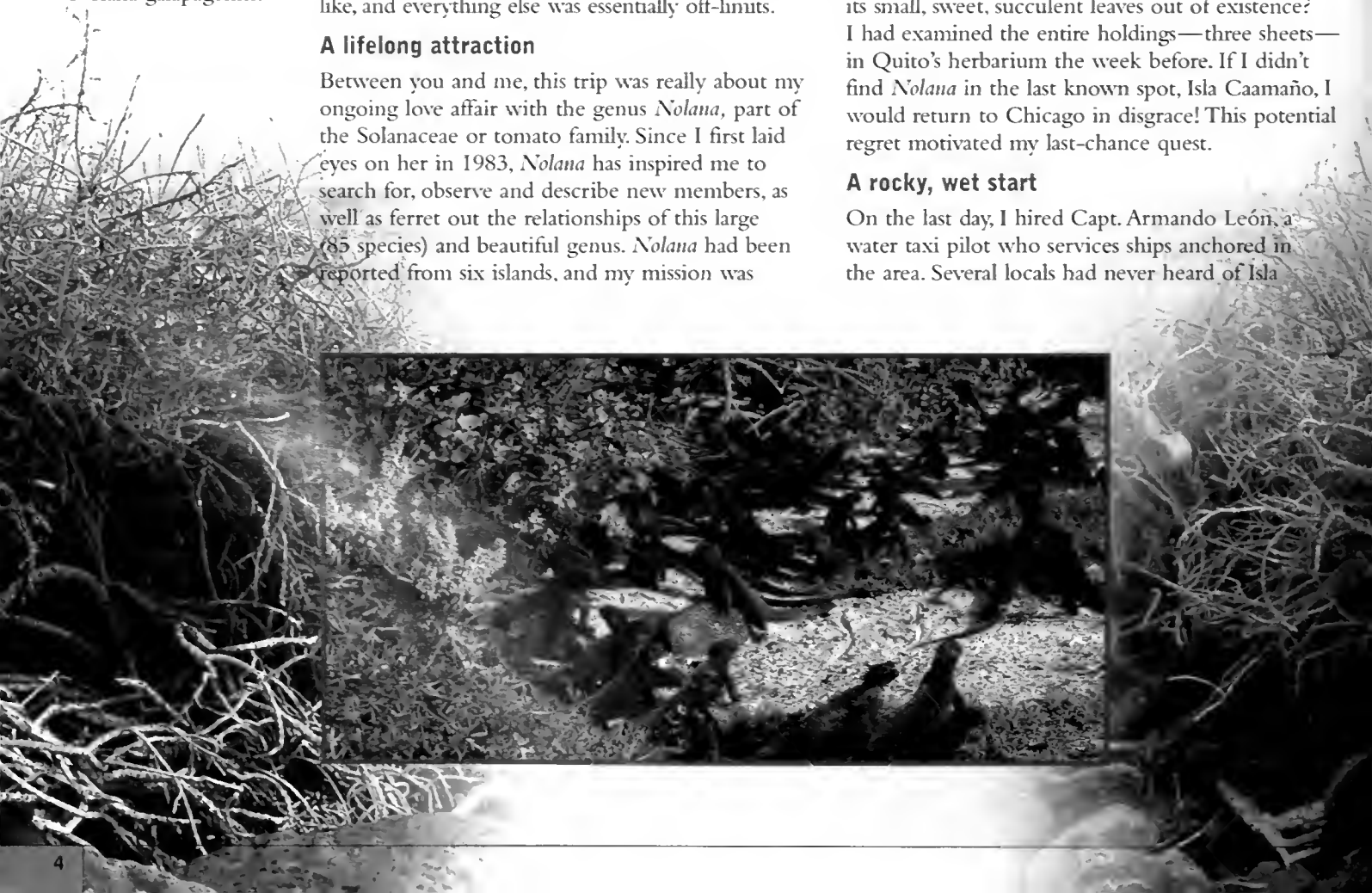
A lifelong attraction

Between you and me, this trip was really about my ongoing love affair with the genus *Nolana*, part of the Solanaceae or tomato family. Since I first laid eyes on her in 1983, *Nolana* has inspired me to search for, observe and describe new members, as well as ferret out the relationships of this large (85 species) and beautiful genus. *Nolana* had been reported from six islands, and my mission was to collect at least one sample for our molecular systematic studies. Dr. Jun Wen, a curator in The Field Museum's botany department, is spearheading the DNA sequencing efforts that allow us to examine relationships between representatives found on the coasts of Peru and Chile and those found on the islands. We had conducted preliminary studies with a *Nolana galapagensis* sample taken from a herbarium sheet that had been completely expended, and attempts to isolate DNA from additional herbarium samples also proved unsuccessful. There was only one choice: Go to the Galápagos to retrieve a viable sample. Collecting *Lycium* and *Grabowskia* would be an added bonus.

After visiting several sites on two islands, I was both perplexed and discouraged. I found abundant *Lycium* and *Grabowskia*, but not a single *Nolana galapagensis*. Could goats and iguanas have eaten its small, sweet, succulent leaves out of existence? I had examined the entire holdings—three sheets—in Quito's herbarium the week before. If I didn't find *Nolana* in the last known spot, Isla Caamaño, I would return to Chicago in disgrace! This potential regret motivated my last-chance quest.

A rocky, wet start

On the last day, I hired Capt. Armando León, a water taxi pilot who services ships anchored in the area. Several locals had never heard of Isla



Below: Iguanas savor the sweet, juicy leaves of Nolana galapagensis.

Caamaño, but Capt. León confidently said, *"Ninguna problema,"* or "No problem!" My Geo-Positioning System (GPS) told me exactly where the *Nolana* had been collected on this teeny island less than two miles south of the Equator and due east of where we were located.

When we arrived around 6:30am, the tide was receding. Capt. León motored to within 20 feet of Isla Caamaño's rocky shore and admonished me to *"Salta,"* or "Jump." I threw my legs over the bow and into the water. At that moment, a wave drove the back of the boat into me, pushing me under water. Capt. León threw the boat into reverse. I got back to my feet in the surging surf and struggled to shore, praying that my digital camera had survived the dunking. I frantically opened the backpack and found all but its innermost contents wet: The digital camera was dry! As I gathered myself, Capt. León anchored the boat in deeper water and snorkeled to shore.

As the excitement of the landing subsided, I became aware of my surroundings. A quick review showed a bruised and bloody knee and shinbone—mere flesh wounds for someone on the verge of finding the elusive plant of his desires. It was a surreal scene with sea lions, mostly females and pups, and dozens of black marine iguanas lounging about. I saw some shrubs several meters away and cleaned my glasses, recognizing the distinctive shape of *Nolana galapagensis!* Its leaves were so dense that the sinuous branches looked like fleshy, lime green snakes arising from the body of the shrub. Within 45 minutes, I sampled more than a dozen individuals over the entire island. I swam back to the boat with some difficulty, holding my treasure-filled backpack above my head.

Time and economic constraints forced me to be content with one population, but future plans call for sampling populations on every island to examine DNA variation. Many *Nolana* species from Peru and Chile have been sequenced in our preliminary studies, allowing us to address such questions as: What is *Nolana galapagensis* most closely related to on the mainland? Where did it originate? How long has it been isolated on the islands? How genetically diverse is each island's population? And the most intriguing question will never be answered: How did *Nolana galapagensis* ancestors arrive on these remote islands?

Injuries and near-zero yields are part of the lot for scientists in the field. But they're also what keep us going, especially in such mysterious places as the Galápagos Islands. We'd be out of a job if we weren't driven by inquiry and unnerved by inconvenience. The fishermen's strike prevented me from bringing my collections back to Chicago, and my CDRS colleagues are still rebounding from the event. But we are planning a series of investigations in cooperation with the CDRS, and I eagerly await my return. **ITF**

For more on Dr. Dillon's research in the Galápagos Islands, consult www.sacha.org.

Left: Capt. León was as excited as I was to find Nolana galapagensis.

Below: A sea lion basks near Nolana.

SAM and I

Todd Dresser, Environmental Outreach Specialist, Department of Education

How many people do you know who play in the dirt for a living? As an educator with the Soil Adventure Mobile (SAM), the outreach component of the *Underground Adventure* exhibition, I bring educational programs about soil and the life in it to children throughout the Midwest. SAM educators can present four one-hour programs a day for up to 30 students each session. Dig into this account of a typical day:

6:30am Beetles ... check. Worms ... check. Directions to program site ... hmmm. Am I going to Oak Park, Oak Lawn or Oak Brook? At some point, 'Oak' should have been outlawed from town names! Mapquest.com thankfully offers salvation, and I am on my way.

7:30am Arrive at today's school. Traveling opposite the rush-hour traffic is definitely a perk of the job. Now, if I can just wedge my UPS-sized SAM into the Honda Civic-sized spot reserved for it...

8:00am Roll the exhibit carts into the school. Students will investigate soil ecology with the critter cart, nutrient flow with the decomposer cart and the inorganic parts of soil with the rock cart. Or, as I tell the students, they'll learn about living stuff, dead stuff and stuff that has never been alive.

8:30am First class, third grade. The average age of youngsters that SAM educates, third graders are curious, excited and unafraid to touch things that they will consider gross in a few years. Fortunately, their teacher prepared them with the curriculum I had sent a few weeks earlier. The students' synapses are firing, and they are eager to delve deeper into the "world beneath their feet."

Jason Knight, left, and Elah Brooks of Hoover School in Calumet City get a hands-on lesson in dirt.

©NATALIE BATTAGLIA/NWI TIMES

9:30am Second class, sixth grade. It's a nice day, and the teacher has just completed a soil ecology unit. So, I grab my soil probe and take the students outside to test samples. Using their background knowledge and tidbits they have gathered from the exhibit carts, we assess how the samples were made. Students are asked how living organisms interacted with parent material under a climate regime over time, and if the sample would be good for farming, building a house, putting in a septic system and other uses.

10:45am After downsizing the exhibit carts, it's time for a story and tactile soil exploration with the kindergarteners. The beautiful thing about five-year-olds is that they bravely plunge their hands into the soil and discuss it, yet they are also daring enough to put a worm in their mouths. Fortunately for their taste buds—and me—we avoid that pitfall and enjoy our time together.

11:15am Lunch. Is it casserole or pizza day? If it's pizza day, I save my lunch for tomorrow. If not, I stick to the peanut butter and jelly sandwich I brought from home.

12:15pm Last class, eighth grade. The ability to work in small groups must be hormonally linked—maybe in the pimple gland—because it surfaces between sixth and eighth grades. Each group gathers soil samples along a hillside in the schoolyard, then we all reconvene to discuss the samples and how the slope affected soil formation. Together we try to identify organisms living in the soil.

1:15pm Bid *adieu* to the schoolchildren. Load the exhibit carts back onto SAM.

2:30pm Arrive back at The Field Museum. Return critters to the containers that prevent them from roaming around the Museum. Push some papers, and get directions to tomorrow's program. It's a dirty job, and I'm happy to do it. **ITF**

If you'd like the Soil Adventure Mobile to visit your community center or event this summer, call Todd Dresser at 312.665.7506 or email tdresser@fieldmuseum.org.

The Soil Adventure Mobile is sponsored by Monsanto. Additional support provided by The Albert Pick, Jr. Fund.

Night Visions: The Secret Designs of Moths

July 24, 2004–Jan. 9, 2005

Discover the surprising beauty of moths through stunning, larger-than-life images. In a small farm in New York, artist Joseph Scheer has collected more than 1,000 species of moths. Using a high-resolution scanner and magnifying images up to 60 times their actual size, he creates richly detailed prints that reveal secrets rarely visible to the naked eye.

Join Scheer for an insider's look at this new exhibition.

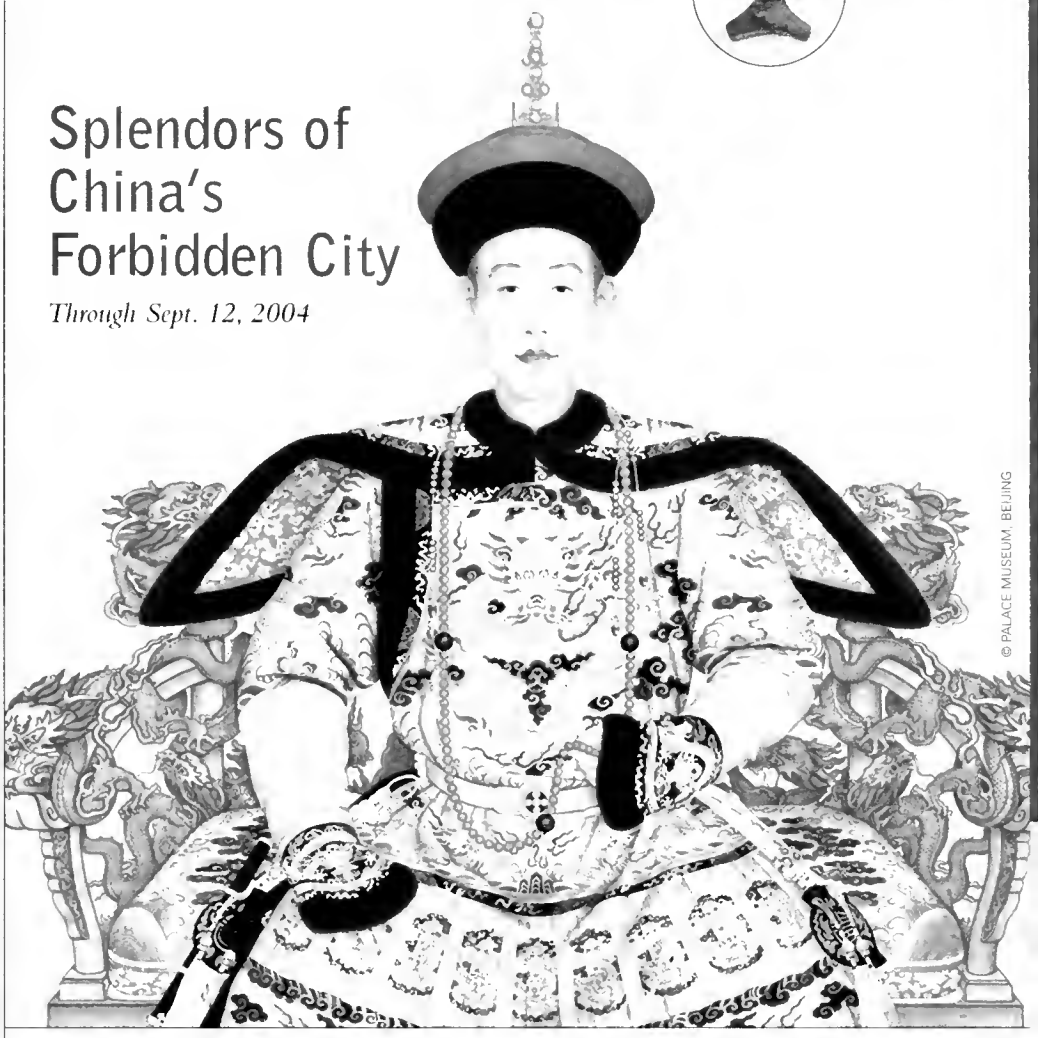
Saturday, July 24, 1pm
Free with Museum admission

This exhibition was developed by The Field Museum in collaboration with Joseph Scheer.

© JOSEPH SCHEER

Splendors of China's Forbidden City

Through Sept. 12, 2004



© PALACE MUSEUM, BEIJING

Explore the hidden world of the Imperial Court and experience the Chinese empire at the peak of its wealth and power. This incredible exhibition opens a window into the daily life of a Chinese emperor, with all its spectacular ritual and awe-inspiring symbolism. Detailed displays evoke the ambiance of palace chambers, transporting you to the sumptuous private quarters of the emperor and his many wives. You'll see a five-foot Buddhist stupa made entirely of gold, jade-handled swords, embroidered silk robes, detailed paintings of court life and nearly 400 other extraordinary treasures that were once hidden from all but the highest ranking officials.

Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong was developed by The Field Museum in cooperation with the Palace Museum, Beijing.

Presented by Exelon, Proud Parent of ComEd.

Additional support provided by the Elizabeth F. Cheney Foundation and the E. Rhodes and Leona B. Carpenter Foundation.

This exhibition is supported by an indemnity from the Federal Council on the Arts and the Humanities.

The Field Museum

General Museum Information: 312.922.9410

Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee, for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full

Examine the vibrant cultural history of contemporary and ancient China.

Call 312.665.7400 to register for an exciting array of adult and family programs designed to complement the *Splendors of China's Forbidden City* exhibition.

Inside China's Forbidden City

Discover the hidden world of China's Forbidden City! Understand Imperial China's religions, art and court life, as well as its relationship with the Western world. The Field Museum and the University of Chicago are co-presenting this lecture series.

Each lecture: $16, students/educators $14, members $12
Full series (save 15 percent): $82, students/educators $72, members $62
Any three lectures $44, students/educators $38, members $32

MARK A. PHILLIPS/PHOTOGRAPHIC

Bringing the Forbidden City to Chicago

Dr. Matt Matsuk, TFM Exhibitions Dept.

Find out how a diverse team of anthropologists and exhibition specialists brought the imperial court of 18th-century China to life for Museum visitors.

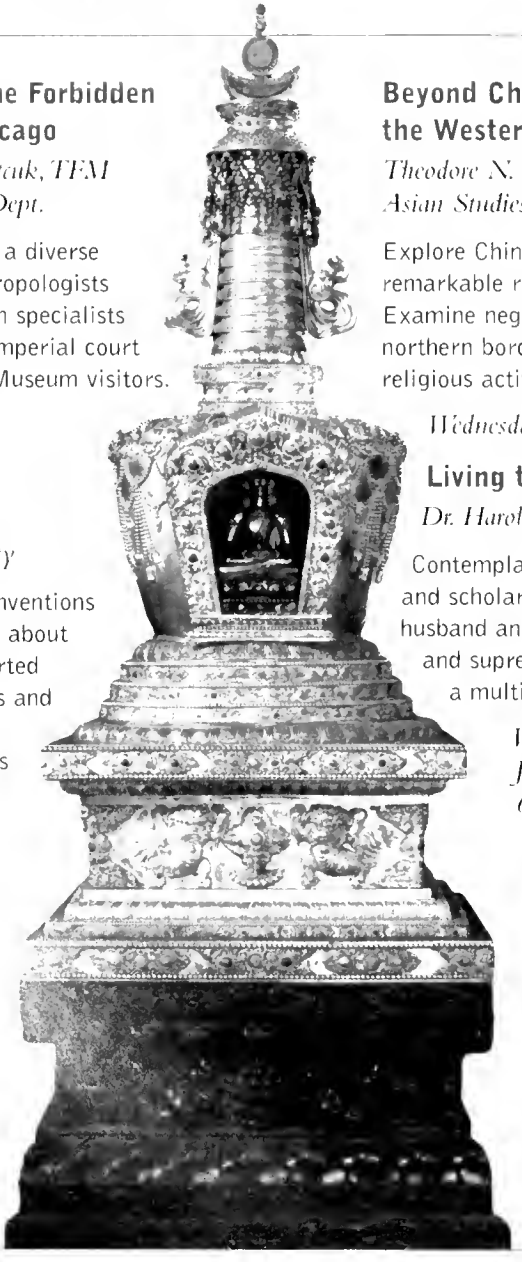
Wednesday, June 30, 6pm

Religious Traditions of the Forbidden City

Susan Naquin, Princeton University

Marvel at the diverse religious conventions of the Qing imperial family. Learn about their pilgrimages, how they supported Daoist priests and Buddhist monks and participated in Confucian rituals. Hear how the exhibition's religious objects are related.

Wednesday, July [illegible], 6pm



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Beyond Chinese Borders: Relations with the Western World in the 18th Century

Theodore N. Foss, University of Chicago Center for East Asian Studies

Explore China's relations with the outside world under the remarkable reigns of Kangxi, Yongjeng and Qianlong. Examine negotiations between China and Russia over the northern borderlands; the Jesuits' scientific, artistic and religious activities; and the country's burgeoning trade.

Wednesday, July 14, 6pm

Living the Emperor's Life

Dr. Harold Kahn, Stanford University

Contemplate the emperor's many roles—as gentleman and scholar, poet and aesthete, warrior and hunter, husband and son, traveler, religious practitioner, judge, and supreme administrator of a multi-ethnic empire.

Wednesday, July 21, 6pm

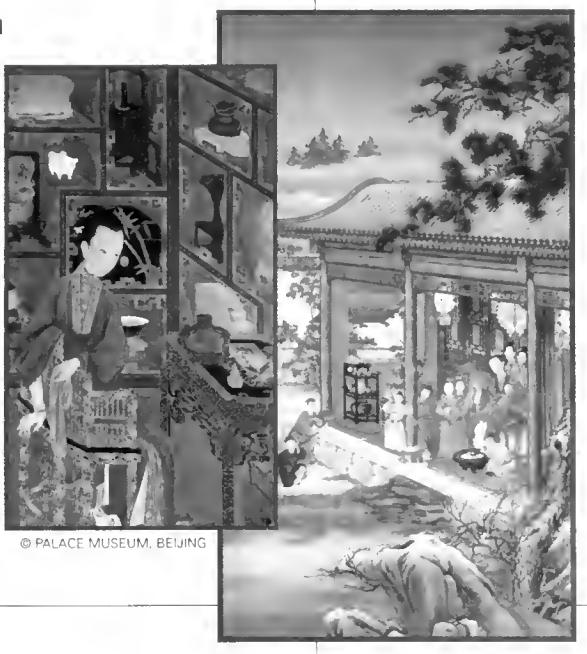
© PALACE MUSEUM, BEIJING

The Emperor's Ladies: Women in Qing Court Society

Dr. Evelyn Rawski, University of Pittsburgh

Examine the vast roles different groups of women played, including wives, servants and shamans, and discover the political and personal dimensions of their lives in court society.

Wednesday, July 28, 6pm



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Art and Identity: Representations of Emperor Qianlong

Maxwell K. Hearn, The Metropolitan Museum of Art

Hear how Emperor Qianlong presented himself as an archetypal monarch by sponsoring a new synthesis of Chinese and Western painting that resulted in idealized imperial portraits.

Wednesday, August 4, 6pm

Family Programs

Chinese Arts Festival

Expand your horizons! Build kites, learn about Chinese calligraphy and instruments and witness dazzling dance performances. Show off your new kite in a celebration on the Museum's north side at 2pm.

Saturday, July 17, 11am–3pm
Free with Museum admission

Artists at the Field

Watch Chinese calligraphers demonstrate their striking craft, then have your name or another special character created.

Saturdays, June 19, July 17, Aug. 21 and Sept. 11
Free with Museum admission

Story Time

Hear a story and make an art project—all in just 20 minutes! One adult for every three children, please.

Saturday and Sunday, 1:30pm
Daily in July and August
Free with Museum admission

Interpretive Stations

These hands-on stations let families delve further into China's natural and cultural history.

Daily in July and August, 10am–noon and 1pm–3pm
Free with Museum admission

Walks

Chinatown

Explore a window into China, just minutes from downtown Chicago! Visit a mural, a square filled with sculptures of zodiac animals and Ping Tom Park's striking gardens.

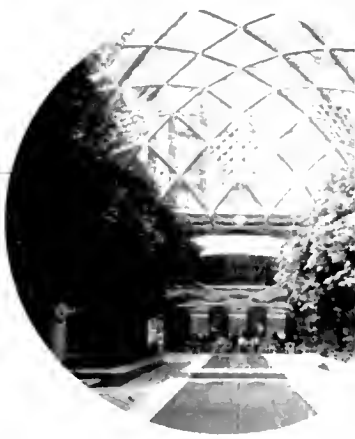
By appointment. Please call the Chinatown Chamber of Commerce at 312.236.5320.
Free, donation suggested

LAUREN MILLS

Ravinia Festival opens its 2004 centennial season with an American premiere of the first South African opera in Zulu, *Princess Magogo*. Composer Mzilikazi Khumalo and librettist Themba Msimang based the opera on this popular Zulu princess, herself a singer. The work was selected in part to recognize the 10th anniversary of democracy in South Africa. Preview this enchanting opera at the Museum with a Zulu choral music program by the show's performers.

Field Museum preview, Saturday, May 29, 11am
Free with Museum admission

Ravinia Festival performances, June 4–6
Tickets on sale at www.ravinia.org.



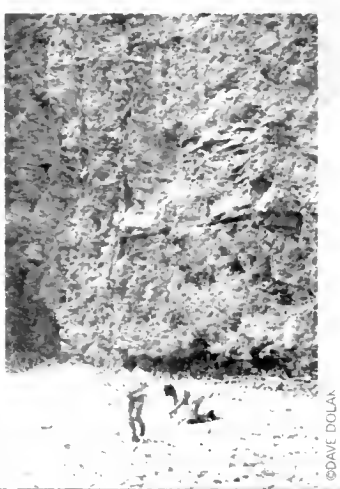
Fieldtrips

Fossil Collecting at Thornton Quarry

Dave Dolak, Columbia College

Reconstruct the Illinois landscape of 425 million years ago when a shallow, subtropical sea covered the area. You'll learn about the organisms that lived in this ancient environment and discover techniques for finding the fossils that time left behind. Limited to 40 adults.

Saturday, June 19, 8am–3pm
$60, members $50



Big & Green Day

Chicago Architecture Foundation (CAF)

Tour Chicago's greener side. See two CAF exhibitions, *Big & Green: Toward Sustainable Architecture in the 21st Century*, and *Chicago Green*; the Chicago Center for Green Technology; and Loop buildings old and new that contain sustainable elements. Big & Green Day was planned by CAF in collaboration with The Field Museum.

Tours meet at CAF, 224 S. Michigan Ave.
Saturday, June 19, 10am–2pm
Free admission. Check www.architecture.org for event details.

The CAF exhibitions, featuring models and drawings of environmentally friendly projects here and around the world, will run through Sept. 12.

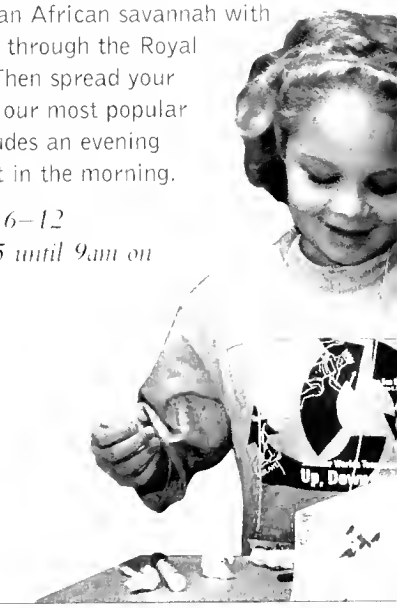
Below is a calendar of current and upcoming temporary exhibitions. Some dates may change.
Visit www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Night Visions: The Secret Designs of Moths
July 24, 2004–January 9, 2005

The Natural Wonders of Madagascar: Photographs by Harald Schütz
Through July 5

Sue the T. Rex is having a sleepover! Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amid some of our most popular exhibitions. The event includes an evening snack and a light breakfast in the morning.

Families with children ages 6–12
5:45pm on Friday, June 25 until 9am on Saturday, June 26
$47, members $40



Chicago Waterways

Dr. Irving Cutler, Professor Emeritus, Chicago State University

Cruise Chicago's waterways for a unique perspective on the economic, ecological and historical development of our metropolitan area.

Saturday, July 10, 9am–5pm
$60, members $50

Participants meet at the Wendella Boat Dock on Michigan Ave. Bring a lunch and beverage (no alcohol please). An alternative route is planned if inclement weather prevents travel on Lake Michigan.

Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong
Through September 12, 2004

Urban Expressions: Young Voices, New Technologies
Through January 17, 2005

Limited Space Available

With stops at all three Museum Campus institutions, summer camp kids will examine telescopes, 18th-century Chinese art and spineless sea creatures. Campers will also explore exhibitions, make art, play games and eat lunch by the lake.

For children ages 5–10 only. Choose one session: July 5–9, July 12–16, July 19–23 or July 26–30. Register through the Adler Planetarium, 312.322.0329. $220, members $200.

Want an easy way to teach your children about biodiversity and conservation? Our newest Family Adventures Tour offers exhibition highlights and intriguing questions that will get your group sharing and having fun together. Learn how all plants and animals are connected, and how even the youngest visitor can help protect our environment. Download the tour from the Planning Your Visit section of www.fieldmuseum.org, or pick it up at the information desk.

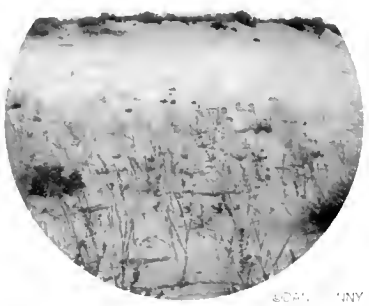
TANISHA SHAH

Explore the Lost Mound National Wildlife Area

Alan Anderson, Chicago Audubon Society

Travel to the shores of the Mississippi River to explore Illinois' largest contiguous remnants of sand prairie and savanna. This expansive wildlife and fish refuge area provides diverse habitats for a variety of threatened and endangered species. You'll study native plants and search for late nesting birds and juveniles. Limited to 40 people.

Saturday, July 17, 6am–6pm
$60, members $50



Reading the Landscape of Michigan's Upper Peninsula

Dr. Phil Janney, TFM Geology Dept., and Dr. Wendy Taylor, University of Chicago

Join geologists on a two-day fieldtrip to explore the rich geology and history of the Keweenaw Peninsula of Michigan. Learn about Copper Country, land formed before life existed on Earth's surface! Visit working mines, geologic outcrops, historic villages and magnificent national parks.

3:30pm on Friday, August 27 until 6pm on Sunday, August 29
$275, members $200

Tres of the Americas: Selections From the Anthropology Collections of The Field Museum

Through May 30, 2005

Life Over Time has closed to make way for an exciting new exhibition opening in 2006 exploring the history of life on Earth—complete with an expanded dinosaur hall! In the meantime, stop by Dino Zone near the McDonald's Fossil Prep Lab for hands-on activities and a look at the new exhibition's design concepts.

Coming This Fall —

JACQUELINE KENNEDY:

THE WHITE HOUSE YEARS

Selections from the
JOHN F. KENNEDY [illegible]

We'll kick off this fabulous lineup on Nov. 13 with acclaimed historian and author Robert Dallek. Dallek's landmark biography, *An Unfinished Life: John F. Kennedy 1917–1963*, creates a dramatic, vivid portrait of the bold, brave, human Kennedy.

On Dec. 1, Hamish Bowles, European editor-at-large of Vogue and curator of *Jacqueline Kennedy: The White House Years*, will investigate how Mrs. Kennedy helped revolutionize the nation's taste and fashion and became a leading promoter of American arts and culture.

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum was organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

© MARK SHAW/PHOTO RESEARCHERS

Witness a Peruvian excavation

Join expeditions@fieldmuseum now to follow four scientists excavating a mountaintop in remote southern Peru throughout the summer. The team is investigating how provincial dignitaries of the ancient Tiwanaku state and the contemporary Wari empire of South America interacted in elaborate festivals. Sponsored in part by the National Endowment for the Humanities, the team is forming the foundation for understanding the origins of religious differences among the Andean empires of 1,500 years ago. To register for first-hand dispatches during the excavation, email expeditions@fieldmuseum.org or visit www.fieldmuseum.org/expeditions.

Discover secret worlds and ancient relics.

Urban Expressions: Young Voices, New Technologies

Through Jan. 17, 2005

See and hear first-hand accounts of young Chicagoans reflecting on urban life.

This exhibition was developed by Street-Level Youth Media in collaboration with The Field Museum.

Night Visions: The Secret Designs of Moths

July 24, 2004–Jan. 9, 2005

Discover the surprising beauty of these night creatures through stunning, larger-than-life images that reveal secrets rarely visible to the naked eye.

This exhibition was developed by The Field Museum in collaboration with Joseph Scheer.

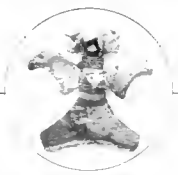
Treasures of the Americas: Selections From the Anthropology Collections of The Field Museum

Through May 30, 2005

Witness the exquisite craftsmanship and sophistication found within the Museum's extraordinary collections—from cultures as diverse as Arizona's living Apache to Ohio's ancient Hopewell.

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by the Institute of Museum and Library Services, a federal agency, and by a CityArts Program 4 Grant from the City of Chicago Department of Cultural Affairs and the Illinois Arts Council, a state agency.

In accordance with Title IX of the Education Amendments Act of 1972, we do not discriminate on the basis of sex in our programs or activities. Should you have any questions or concerns, please contact our Title IX coordinator in the human resources department, 312.665.7271.



Soldier Field's North Garage is across the street from our main entrance. Visit www.fieldmuseum.org for the latest information on parking lots/rates, free trolleys and public transit.

9am–5pm daily. Last admission at 4pm.

Splendors of China's Forbidden City is a specially ticketed exhibition. Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership desk. Non-member tickets can be reserved through 866.FIELD.03, www.tickets.com or at Tickets.com outlets (service charges apply). Non-member tickets are also available at the Museum's admission desks while supplies last (no service charges).

Visitors using wheelchairs or strollers may be dropped off at the west entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

312.922.9410 or www.fieldmuseum.org

An Intact Tomb

Removing the tomb door carefully, and with some trepidation. Inset: Ceramic vessels piled in a corner of the tomb.

Last spring, during an excavation at the hilltop terrace site of El Palmillo in Oaxaca, Mexico, Field Museum archaeologists uncovered an elaborate residence of rooms around a sunken patio. But the lack of human burials was an enigmatic chink in the team's ongoing efforts to reconstruct the site's prehispanic past.

Fate finally shifted when the team, led by Gary Feinman, PhD, anthropology department chair and a curator, found a subterranean tomb. Would there be anything inside? How would they enter it without disrupting the surfaces above? With so little time left on the fieldtrip, could they excavate the tomb with proper care, or leave it unattended for another year, fearing that it might get looted?

Once excavation was imminent, the team photographed the tomb's interior through a small opening in the massive stone door. Astoundingly, neither looters nor nature had disturbed its contents much since it was sealed 1,500 years ago. It took seven men to safely remove the door. Inside were 25 ceramic vessels and three individuals, including one person in a cross-legged position who seems to have worn a green stone bead, a symbol of high rank.

The more arduous work continues in the lab, where sometimes years of analysis, interpretation and documentation are required for each field season. The tomb turned out to be one of the most elaborately constructed tombs found outside the ancient Zapotec capital of Monte Albán, and the artifacts are revealing how people at the top of the hill lived differently from those below.

Dr. Feinman's expedition was featured in a free program in which our scientists share their field experiences through emails, photographs, video and other media. Email expeditions@fieldmuseum.org or visit www.fieldmuseum.org/expeditions to sign up.

The Beijing Eight: Working in the Forbidden City

Robin Groesbeck, Manager, Exhibition Coordination

On a brisk morning in January, a team of Field Museum exhibition professionals, clad in bulky layers of polar fleece, examines exquisite imperial artifacts in the dim light of the Wenhua Dian, or Hall of Literary Glory, in Beijing, China. Aspiring bureaucrats once sweated over civil service exams here some 250 years ago, but the times and inhabitants have changed dramatically.

Formerly the Forbidden City and exclusive home to China's supreme rulers, this 178-acre walled complex, housing more than 1 million objects, is now the Palace Museum. And today, the Beijing Eight, as we have anointed ourselves, has begun examining and packing the objects that will travel to Chicago for the exhibition *Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong.*

Halls full of surprises

Electrical heating and lights are not allowed in the Palace Museum in order to protect its ornate, ancient wooden buildings from the ever-present threat of fire. In our honor, Ding Meng, the Palace Museum's project manager for this phase of the exhibition, had a few bulbs temporarily installed, and we applauded him before diving into work.

For 11 days, nearly 30 people from The Field Museum, Palace Museum, the Chinese Bureau of Cultural Relics and our packing and shipping agent, Huaxie International Fine Art Freight Services, examined some 400 stunning artifacts, including teapots, vases, writing instruments, armor, garments and weaponry. We unrolled vividly preserved 39- to 75-foot-long scrolls and inspected elaborate Tibetan Buddhist stupas that come apart into 40 pieces. And we photographed, videotaped, annotated and assembled incredibly detailed records, called condition reports, that would accompany every piece on its journey to The Field Museum, The Dallas Museum of Art and back home to Beijing.

While compiling the exhibition's object list two years before, Field Museum curators Bennet Bronson, PhD, and Chuimei Ho, PhD, selected many pieces that had never been on display—even at the Palace Museum. For example, Palace Museum curators expressed surprise when Drs. Bronson and Ho asked to borrow the emperor's funerary tablet, which they found in a storage area. In fact, our Palace Museum colleagues studied many pieces during the condition reporting process for the first time—not unusual in this compound of nearly 10,000 rooms.

Angie Morrow, exhibitions registrar, and Francesca Pons, project administrator, organized the trip's logistics. Pons explained, "As soon as we arrived, I realized my fears had been groundless. The Palace Museum staff and the Hall of Literary Glory were totally organized and ready for us to begin." Workstations had been set up, and new yellow packing crates were stored nearby. The Palace Museum staff had also spent weeks preparing custom-made, traditional silk-lined inner boxes for many pieces.

Top: Felisia Wesson (left) and Jill Plitnikas assess the emperor's desk.

Bottom: Conservator Betsy Allaire (far right) and two Chinese colleagues inspect a national treasure.

We formed three teams that each included an interpreter, curators, conservators and note-and-picture takers. We pored over each object, noting every loose thread, tiny dent or missing inlay, before trained art handlers skillfully, carefully wrapped and packed it. This process was repeated nearly 400 times over 11 straight days of work!

To help sustain this intense activity, the Palace Museum generously served elaborate lunches each day. Morrow, who subsists largely on Nutter Butters and Peeps Marshmallow Treats in the States, broadened her culinary horizons as she sampled "fish with many paws" (baby octopus), steamed lotus

BACKGROUND: PAVILION OF RAINING FLOWERS/MATT MATCUK

root and many varieties of mushrooms. "The hot lunches really got us through the day," she said. We were treated to as many as 20 dishes each noon, very few of which were repeated during the trip.

Our responsibilities didn't end with condition reporting. As figurehead of The Field Museum's delegation, Vice President and General Counsel Felisia Wesson attended meetings and banquets, presented gifts and advised the team on legal and insurance issues. But these duties played second fiddle to Wesson's main job—helping the team photograph and document the objects, day after day.

Wesson reflected, "The trip gave me the chance to get out from behind my desk and participate in fieldwork. As a result, I feel more connected to the Museum and have a real appreciation for what goes into these exhibitions."

Field Museum conservators Ruth Norton, Betsy Allaire and Jill Plitnikas relished the chance to closely examine an extremely wide variety of

materials, including porcelain, jade, gold, silver, ivory, bronze, wood, lacquer, kingfisher feathers, cloisonné, water-based and oil paintings, calligraphy, pearls and textiles.

"I loved examining the pieces! My Chinese colleagues, Mr. Zhao and Mr. Tu, talked about the nature and history of the objects as we worked," said Allaire. "I really appreciated learning so much more about Chinese art.

At first it was slow going, but as we began to understand the condition issues that were important to each of us, the process went more smoothly," Allaire continued. "For example, my Chinese colleagues noted recent changes such as dents or scratches, while I was looking for active corrosion in metal, lifting paint in lacquer, brittle areas—weaknesses that could lead to issues down the road."

Challenges onboard

Packing and transporting the objects required considerable teamwork and ingenious problem solving. To move an intricately carved jade boulder, "The Nine Elders of Huichang," for example, we used carefully placed straps and a customized shipping crate to protect the delicate surfaces of the one-ton object.

After packing, the crates were loaded onto trucks and taken under police escort, with sirens blaring, to the Beijing airport. Ensuring that airport personnel treated the crates gently provided the trip's most difficult moments for Morrow.

"The hardest part was the last few days when I had bronchitis and had to stand out on the open tarmac in wintry weather, or sit in a truck for hours on end, watching our crates being grouped onto pallets for air transport. Unfortunately I don't speak Chinese, so at times it was hard to communicate with the airport crew," Morrow said.

Later, members of the Beijing Eight accompanied each bright yellow shipment home to Chicago. Morrow, who has flown as a courier for more than 30 exhibitions, took the toughest leg, which included 30 hours aboard an air freighter and stops in Anchorage and New York. She had to guarantee that every crate was loaded back onto the aircraft after each landing. In New York, airport personnel wanted to give Field Museum cargo space to another client, yet Morrow refused to let the plane take off until our shipment was safely back on board.

After each airplane arrived in Chicago, the crates were delivered to the Museum's loading dock and transferred into the exhibition hall. Production Supervisor Nel Fetherling, whose team built and installed the exhibition, remarked, "It was a relief to finally get the crates, to have our coworkers back safe and sound and to realize the quantity of artifacts was actually *finite*."

The physical challenges and pressure we had faced faded into the background as the Beijing Eight surveyed a sea of crates, now securely ensconced in The Field Museum.

Morrow concluded, "We enjoyed a feeling of great accomplishment after doing something that seemed so daunting—seeing it all come together. And how many people get the opportunity to work in an amazing place like the Palace Museum?" ITF

Top: Ruth Norton, chief conservator, and Zhang Guangwen examine the emperor's saddle.

Bottom: Palace Museum staff exercise regularly during breaks.

Splendors of China's Forbidden City *runs through Sept. 12, 2004. See the calendar for exciting programs that complement the exhibition.*

Southern Beetle Quest

Margaret K. Thayer, PhD, and Alfred F. Newton, PhD, Curators of Coleoptera, Department of Zoology

Our latest beetle-collecting trip started with unwelcome news after a 14-hour flight from New York to Johannesburg: Our luggage hadn't come with us. Eight big pieces, containing countless pounds of field gear and clothes for four people on a six-week trip in South Africa! Fortunately, our visit began with a scientific conference for biologists and geologists in bustling Cape Town, and our gear caught up with us a day and a half later.

ALFRED F. NEWTON/2004022

Arrowinus, *an odd genus restricted to South Africa.*

What brought this little group 9,500 miles from wintry Chicago to summer on the far side of the world? We're both curators of insects (especially beetles) in The Field Museum's zoology department, and were accompanied by Alexey Solodovnikov, PhD, our post-doctoral research associate, and Dave Clarke, our University of Illinois at Chicago graduate student. This expedition to explore the poorly known rove beetles (the family Staphylinidae) that live in temperate parts of the southern continents was our second trip under a five-year research and training grant from the National Science Foundation's Partnerships for Enhancing Expertise in Taxonomy (PEET) program. The grant involves research in the southern countries of Chile, Australia and New Zealand as well. While the two of us have repeatedly visited those three countries since 1980—totaling 16 months and extending over most of our married life—this was the first trip to Africa for all four of us.

Fieldwork requires lots of advance planning and preparations: learning about different habitat types; getting maps and travel literature; selecting areas in which to collect; seeking advice about good sites; planning visits with South African and other museum colleagues; planning our itinerary; applying for collecting permits—yes, even for insects—after finding out, sometimes with difficulty, where to apply; buying and preparing field equipment; purchasing plane tickets; renting a vehicle; and booking some accommodations.

Of some 48,000 species of rove beetles worldwide, about 1,150 species have been scientifically named from South Africa. Little is known about most of them, and many more species are still unstudied and unnamed. Our trip turned up even more, both in the field and in museums.

The four of us are doing separate research projects on different groups of rove beetles with varied habits, but our usual array of collecting methods, used in appropriate places, is effective

at catching them all. Most are predators and live in forests or other moist places. Flight intercept traps catch beetles flying about in search of their favored foods or breeding sites, and carrion-baited pitfall traps attract beetles that seek carcasses, often eating the maggots there rather than the carrion itself. We installed both kinds of traps at 16 sites, sifted leaf litter at those and other sites for smaller beetles and hand-searched through many microhabitats to find out exactly where our beetles are and what they may do for a living. Rove beetles are found under, on, or in a variety of materials, including the bark of logs, mushrooms, flowers, leaf litter, ant or termite colonies, and dung and carrion, but the habits of many remain a mystery.

Alexey and Al were especially interested in finding *Arrowinus,* an odd, evolutionarily isolated genus that is endemic, or restricted, to South Africa. Just before our trip, they had finished a scientific paper naming and describing three new species in the genus—only one was known before—and describing the larvae of one species for the first time. Beetle larvae, including those of rove beetles, have been found and studied much less than the adults they grow to be. Yet knowledge of larval features is essential to understanding their biology and useful in deciphering the evolutionary relationships of different species and genera. Almost nothing was known of *Arrowinus'* biology from previous specimen labels. We hunted around in many places near where the few existing museum specimens had been collected before we finally found adults of one of the new species near a stream.

Better yet, since our return, Al has quickly scanned through our leaf litter collections. Growing up to 35 millimeters (1.3 inches), *Arrowinus* is not hard to spot among its smaller relatives, which are mostly less than 6 millimeters (0.25 inches) long. Although it will take us a few months to fully sort and process the samples, he discovered that we had collected more adults of all three new species described in the paper and larvae of all four *Arrowinus* species! Happily, Alexey and Al were able to add this new information to their paper before it is published later this year.

Keeping thorough, accurate records is as essential as collecting. We log our collections in a field notebook during the day, and in the evening label the samples with where, when, how and by whom they were collected. That information will get transferred to each and every pin and vial so that anyone studying the specimens in the future will have it. Without such data, the specimens are of little scientific value. Many old museum specimens have vague labels. For example, "Cape" in South Africa may refer specifically to the Cape of Good Hope, to the region around Cape Town or to more than half of South Africa (the former Cape Province), which is almost as large as Illinois, Indiana, Wisconsin, Iowa and Minnesota together. Many very different kinds of habitats exist throughout that area, so a label that says "Cape" is unhelpful to biologists.

The unaccustomed presence of dangerous animals, such as crocodiles, hippos and poisonous snakes, and destructive animals, such as baboons, weasel-like animals and small cats, raised concerns for both our personal safety and the security of our traps. We saw most of these from a distance, but only one carrion trap was disturbed, and we saw only two snakes during the whole trip. Spiny trees, shrubs and vines proved to be more hazardous, causing numerous scrapes and punctures to all!

Through 5,000 miles of driving, sifting 509 pounds of leaf litter and collecting perhaps as many as 100,000 beetles, our worst mishaps were three flat tires. We returned to Chicago (with luggage!) on a very long February 29th, a leap year day to remember. **ITF**

Visit www.fieldmuseum.org/peet_staph for more information on this project.

Left: Dave Clarke, Charlotte Hardy, Margaret Thayer, Al Newton and Peter Hlaváč peer under bark for beetles. Middle: Alexey Solodovnikov inspects a flight intercept trap. Right: The team labels every sample it collects.

DSCN2214/ALEXEY SOLODOVNIKOV

20040227N01/ALFRED F. NEWTON

DSCN1997/ALEXEY SOLODOVNIKOV

She Married a Dinosaur

Paul Brinkman, Library Associate

At the turn of the 19th century, The Field Museum entered into a furious competition with rival institutions to collect dinosaurs. In 1900, paleontologist Elmer Riggs led an expedition with his Indiana cousin, Victor Barnett, and photographer Harold Menke to a new Jurassic locality near Grand Junction, Colo. At the time, Elmer was courting Helen Mosher, a Chicago schoolteacher. Fortunately for historians, their correspondence provides a rich array of otherwise unrecorded details about his fossil fieldwork.

Creating what Elmer called "an oasis in the desert," the party built its accommodations at an abandoned stone shelter that enclosed a spring flowing into a crude stone trough. "The spring and house were soon put in order and a camp planned so cozily that we all claim credit for it," Elmer boasted, eager to impress Helen with his efficient domesticity.

The team pitched its tent opposite the shelter and stretched a tarpaulin between the two to create an enclosed porch. "At the west end near the house we placed the camp stove. The mess chest ... serves a[s] cupboard, while its falling door does duty as kitchen table. ... [T]he loosened door from the spring-house was... made to do duty as dining table. Inside the spring-house the crates of canned goods are stacked against the wall with one side of each opened to afford easy access. The ... trough [preserves our perishables], while its lower extremity does famous duty for washing photographic plates. An inverted box serves Menke as developing table, while the whole, curtained and used at night forms a first-rate dark room with running water. ..."

Nobody lingered in the tent. "Everybody sleeps in the open air by preference, and for a sitting room the porch ... is much pleasanter. Even now Menke is at one end of the improvised dining table writing many letters to his best girls ... while I with a candle ... am struggling between wind and the flapping canvas at my elbow ... to write something that may interest a young lady who expects much in the way of letter-writing."

Though comfortably situated, Elmer's first few weeks were "the most discouraging... period that I have known in seven years collecting." But luck changed in early July, when his party collected several tons of valuable fossils, including the type specimen of the gigantic *Brachiosaurus*. Helen was impressed: "I am very glad you are having so much success. ... It is a pity that you were unsuccessful ... [at] first... and if I were not sure of an indignant denial I might add a little homesick too ... good luck has cured all that. ..."

Good luck also attracted the locals, and the team's solitude gave way to a tiresome procession of visitors. During a Sunday picnic arranged for local families, "Fifty-odd souls besides ourselves lunched on the sand-stone ledge back of the spring-house. The women were shy of coming in, probably because Victor was baking pies beside the entrance, until a sudden shower came on and then the tent was full of sodden millinery." Elmer enjoyed explaining things to the visitors, but became frustrated with idlers and "souvenir fiends" who pried off fossils when the team wasn't around.

Elmer withheld data until the work was finished, not wanting to "give the shop away" to other fossil collectors. While the news leaked nonetheless, Elmer's team netted 38 crates filled with more than six tons of fossils. The following year, he collected another immense Colorado dinosaur—the hindmost half of an *Apatosaurus*—and continued to write Helen. They married in September 1901. While the vivid details subsided, Elmer's earlier courtship of Helen proves how history can be exposed in the most intimate places.

Curious locals visited the dinosaur collecting team's campsite near Grand Junction, Colo.

W MENKE/CSGEO3920H

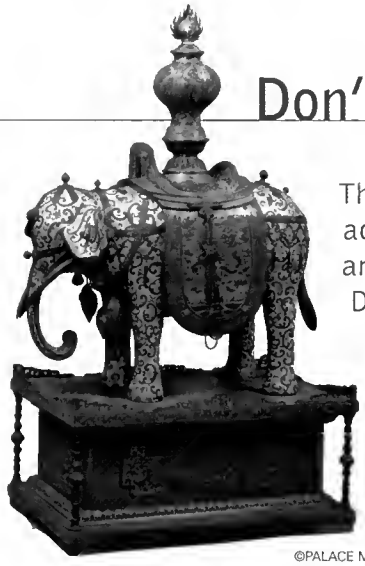
XRT93 Presents Play the Field

Mix culture with cocktails. Experience the best bands. Explore our exhibitions. And view Chicago's spectacular skyline—all for a discount.

Tickets to Play the Field, a popular monthly concert series presented by XRT93, are $10 at the door for Field Museum members with an ID. Summer shows are held on our terrace, giving you a front-and-center view of the skyline, as well as access to the Museum. Each ticket includes a complimentary cocktail.

Play the Field has featured such favored bands as Poi Dog Pondering's Frank Orrall, The Commitments and Michelle Shocked. On June 24, Liquid Soul, Grammy-nominated in 2000 for Best Contemporary Jazz Album, will have you grooving immediately with its irresistible mixture of jazz and urban dance music.

The event is usually the fourth Thursday of each month from 6 to 10pm and is 21 and over. For a schedule of performers and dates, visit www.fieldmuseum.org. All proceeds benefit the Museum.



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Don't Forget Your Benefits

Thank you to all our annual fund supporters. Please take advantage of your free admission, special exhibition tickets and guest privileges. Your invitation to the third annual Donor Appreciation Night will arrive soon. What a wonderful way to celebrate the end of summer and have one last chance to view *Splendors of China's Forbidden City: The Glorious Reign of Emperor Qianlong*. For information about the annual fund, call 312.665.7777 or email annualfund@fieldmuseum.org.

Bloomingdale's Shopping Benefit

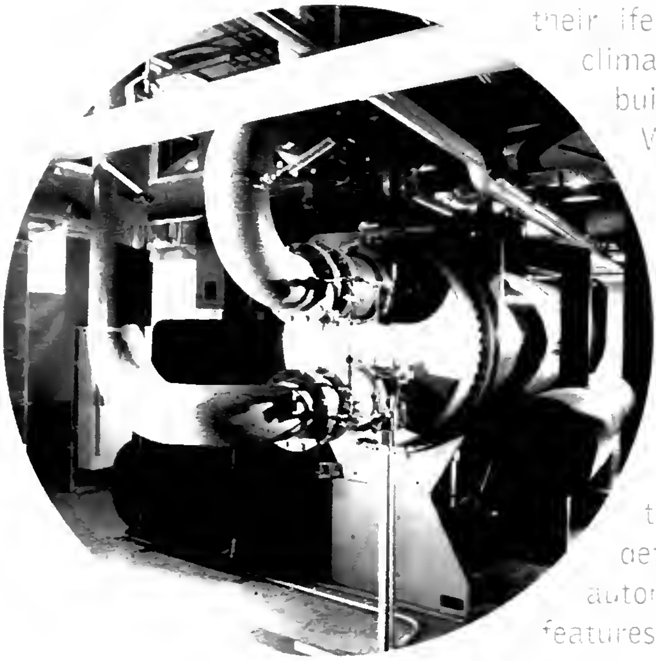
Snag the best in fall fashion and home accessories, while supporting The Field Museum.

On Wednesday, Sept. 1, shop at Bloomingdale's with the Field Associates, the Museum's young professionals group. When you buy a $10 ticket through the Field Associates, Bloomingdale's will offer 15 to 20 percent off every purchase at all city and suburban locations, as well as the Bloomingdale's Home & Furniture Store. Some exclusions apply at each store.

The Field Museum will receive 100 percent of all ticket sales. In addition, the Field Associates will get an extra $5 for each ticket presented at Bloomingdale's doors on Sept. 1. Email field_associates@fieldmuseum.org or call 312.665.7133 to purchase your shopping benefit tickets.

[illegible] Your Museum

[illegible] journalists, but The Field Museum's new central plant is one of [illegible] stories of the year.



Our heating and cooling systems had exceeded their life expectancies, challenging varied climate needs in our million-square-foot building that continues to expand. Whereas organic materials in our collections and exhibitions require precise temperature and humidity levels, visitor and staff needs depend on Chicago's erratic weather!

The complex central plant has a switchgear electrical vault; chillers that make ice during off-peak hours; 48 4,000-gallon ice storage tanks; low-pressure steam boilers; a fire detection and protection system; and automated controls, among many advanced features. The renovations also cost less, save energy and are built to accommodate future growth, [illegible] the Museum's commitment to environmentally responsible action.

[illegible] of this was delivered on time, on budget and while maintaining faultless 24-hour operation of the Museum. Now that's a headline story!

The condenser pumps (right) and ice chillers (above).

The central plant [illegible] was generously funded in part by the [illegible] Department of [illegible] and Economic Opportunity and the [illegible] Department of Natural Resources.

MATT WITHAM/GN90983_07D

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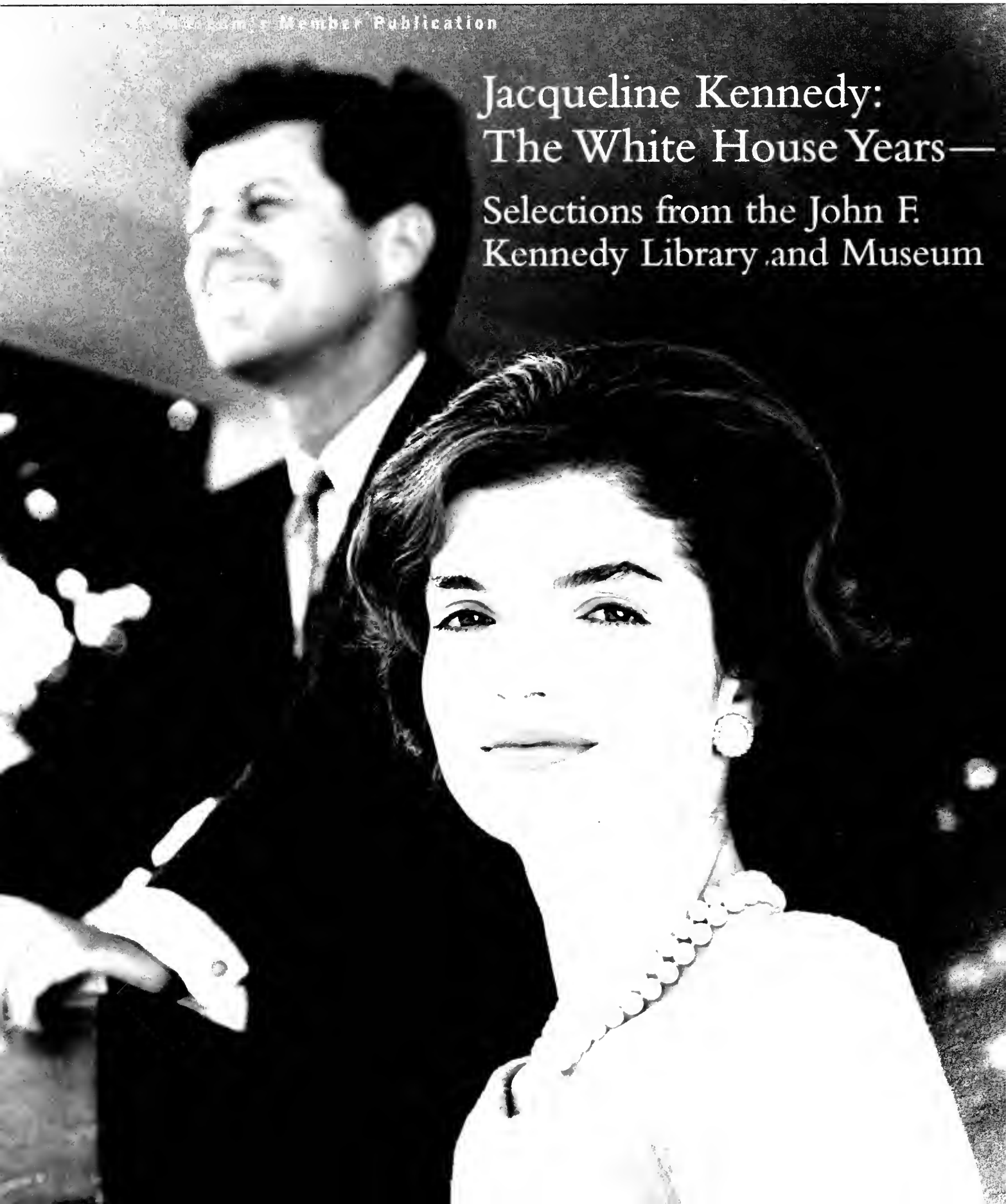
Member Publication



Jacqueline Kennedy: The White House Years—

Selections from the John F. Kennedy Library and Museum

New Doors Opening Around the Museum

JOHN WEINSTEIN /GN88119 6

The Field Museum was teeming this past summer with construction and field research, opening new doors both to the Museum and to understanding our natural world.

It has been easy to get caught in a jumble of construction barricades, cabs, schoolchildren and picture takers as you enter The Field Museum. The chaos will wane when a new entrance opens this fall on the Museum's east side. Previously, the only entrance accessible to visitors with special needs was on the Museum's west side, since impressive but daunting marble steps lead to both the north and south entrances.

Traffic and parking for Museum Campus have been rerouted to accommodate the new Soldier Field. The reconstruction requires that schoolchildren and disabled patrons be dropped off in a new bus staging area on the Museum's east side. If we hadn't built the entrance there, they would have had to walk or be assisted for about a third of a mile around the Museum to the west side. Not only is this dangerous during the winter, it also sends an unacceptable message that special needs are not considered.

The east entrance's most attractive feature is a 42 feet by 42 feet glass skylight.

JOHN WEINSTEIN/GN90694.064D

Disabled visitors and families with strollers can now be conveniently dropped off or picked up at the new ADA-compliant entrance. It provides the 300,000 children who visit the Museum each year with a direct route to the Museum's group orientation area. It improves access to key visitor amenities and more directly connects guests to Shedd Aquarium and Adler Planetarium. The entrance was funded in part with a $5 million grant from the Illinois Department of Commerce and Economic Opportunity.

Summer is the prime season for scientists to conduct fieldwork around the world. We had conservation biologists in Ecuador and Bolivia, zoologists in Utah and Australia and archaeologists in Mexico and Peru, to name a few examples.

My wife Judy and I took two trips to Wyoming with Field Museum geologists. We joined Peter Makovicky to excavate sauropod and ornithopod bones from 110-million-year-old rocks near Lovell. Makovicky just published his research on the age and growth patterns of Sue and other tyrannosaurs in Nature magazine on Aug. 12. Sue, it turns out, was 28 years old at the time of death.

We also visited Lance Grande in the Green River Formation, known for its beautifully preserved fossils of a 52-million-year-old extinct lake community. For more than 25 years, Grande has conducted paleontological excavations in Wyoming for his research on the early development of North American fish fauna. He was recently promoted to vice president for collections and research.

During both trips, it was fascinating to work alongside such geology team members as Matt Brown, Jim Holstein, Akiko Shinya, Lisa Bergwall, Sebastián Apesteguía, Connie Vanbeek and Nathan Kley. Gourmet fare included bison burgers, elk stew, pad thai, spaghetti and pineapple cobbler washed down with Moose Drool and Fat Tire beers—quite different from our usual food options, but fun and memorable aspects of life in the field.

Come back this fall for a whole new way to get into the Museum, and keep reading *In the Field* to learn how our scientists are opening new doors to comprehending the world we live in.

John McCarter

John W. McCarter, Jr.
President and CEO

What do you think about In the Field?

For general membership inquiries, including address changes, call 866.312.2781. For questions about the magazine *In the Field*, call 312.665.7115, email acranch@fmnh.org, or write Amy E. Cranch, Editor, The Field Museum, 1400 South Lake Shore Drive, Chicago, IL 60605-2496.

INTHEFIELD

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Cover: *Jacqueline Kennedy: The White House Years* will be at The Field Museum Nov. 13, 2004, through May 8, 2005. Senator and Mrs. Kennedy, Hyannis Port, Massachusetts, 1959. © Mark Shaw/Photo Researchers

The Field Museum salutes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District.

The Field Museum

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ANNE UMALI

OSWALDO PEIXOTO

Museum Campus Neighbors

Museum Campus For express entry to Museum Campus, exit onto eastbound 18th Street from Lake Shore Drive. Follow the signs to Museum Campus Drive, which takes you to Soldier Field's North Garage on the left, where you can park for The Field Museum or Shedd Aquarium. To access the Adler Planetarium lot, continue north on Museum Campus Drive to Solidarity Drive. Both lots cost $12 during the day. Public transit is also a great alternative. Visit www.museumcampus.org for further transportation details.

Adler Planetarium Take a virtual 3-D tour of the pyramids and temples of ancient Egypt in Stars of the Pharaohs. You'll learn about the important role astronomy played in Egyptian culture, architecture and politics. On Oct. 30, walk like an Egyptian, and dress like one, too, at Haunted Planetarium, The Curse of the Pharaoh. Children wearing costumes will be admitted free with a paid adult. For more information, visit www.adlerplanetarium.org or call 312.922.STAR.

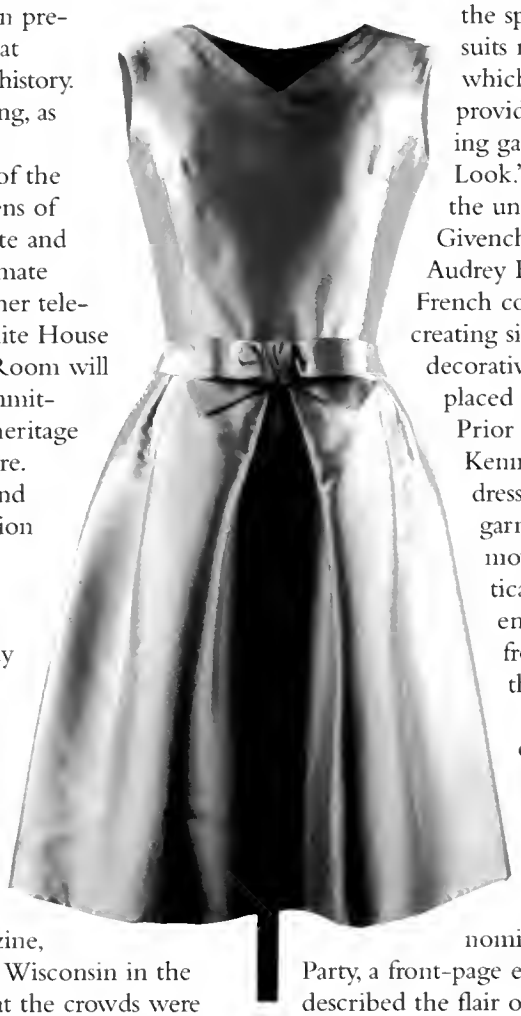
Shedd Aquarium Looking for fun, food and more fun? Visit Sea Star Quest, the hands-on special exhibition for children on live sea stars and their cool relatives. October is National Seafood Month, and during Columbus Day weekend, Shedd will serve up free samples of sustainable seafood and hand out seafood wallet cards and tips on how to enjoy seafood and protect the health of our oceans. Celebrate Halloween with Spooky Seas on Oct. 27 to 31, and wear your best costume to the Spooky Seas overnight, Oct. 29. For details, visit www.sheddaquarium.org or call 312.939.2438.

Jacqueline Kennedy—The Woman Behind the Style

Debra N. Mancoff, Arts Author and Adjunct Associate Professor at the School of the Art Institute of Chicago

An image of Jacqueline Bouvier Kennedy is etched in the American imagination. Youthful, poised and impeccably dressed, Mrs. Kennedy lent a fresh face and striking presence to the spirit of optimism and promise that defined her husband's administration. She understood the semantics of style, and her signature mode of dress—clean lines, clear colors, fine fabrics, superb construction—reflected the shift in American identity that distinguished the all too brief tenure of the Kennedy presidency.

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum is on display Nov. 13, 2004, through May 8, 2005. Supported by The Grainger Foundation and Marshall Field's, the exhibition presents the style and spirit of that memorable time in American history. More than 70 items of clothing, as well as letters and rarely seen photographs, provide a view of the Kennedy years through the lens of Mrs. Kennedy's distinctive taste and insight. Along with these intimate objects, video excerpts from her televised tour of the restored White House and a recreation of the Red Room will celebrate Mrs. Kennedy's commitment to preserving national heritage and promoting national culture. Exploring the substance behind the "Jackie Style," the exhibition offers a vivid portrait of the woman whose intelligence, energy and image recast the traditional role of the first lady as the embodiment of modern American idealism at home and abroad.



Oleg Cassini. Dress in apricot silk ziberline, 1962.

From the public's first glimpse of her during her husband's campaign for the presidency, Jacqueline Kennedy attracted attention. A profile in *LIFE* magazine, covering their swing through Wisconsin in the summer of 1960, declared that the crowds were eager to greet the candidate's "striking wife," and that "Women crane to see what she is wearing." Well educated and accomplished, Mrs. Kennedy soon demonstrated that her appearance was only one facet of what she could bring to the White House. Through her studies at Vassar, the Sorbonne and George Washington University, where she earned a degree in French literature, she honed her intellectual curiosity and developed a passion for history and the arts.

In fact, Mrs. Kennedy's distinctive sense of style developed in tandem with her education and fascination with French culture. She appreciated the spare lines and easy fit of classic suits made by the House of Chanel, which had reopened in 1954 to provide an alternative to the confining garments of the post-war "New Look." Even more appealing were the understated designs of Hubert de Givenchy, who, inspired by his muse Audrey Hepburn, had redefined French couture for a younger client, creating simple dresses with precise decorative touches, such as a perfectly placed bow or set of fabric buttons.

Prior to the campaign, Mrs. Kennedy developed a mode of dress that was sleek and modern—garments that never restricted movement, that expressed sophistication and decorum, and that enhanced, rather than distracted from, the woman who wore them.

As a student of art and culture, Mrs. Kennedy understood the role that personal appearance played in the perception of public identity. The day her husband accepted the presidential nomination from the Democratic Party, a front-page editorial in *Women's Wear Daily* described the flair of the young candidate's wife, who seemed to be "running for election on the French Couture Fashion ticket." The Associated Press picked up the story, and Mrs. Nixon announced that she preferred American designers and always bought off the rack in Washington, D.C. Within a few weeks, Mrs. Kennedy wrote to Diana Vreeland, fashion editor of *Harper's Bazaar,* "I must start to buy American clothes and have it known where I buy them."

Mrs. Kennedy collaborated with American designers to translate her French preferences into a new national vernacular that became known as the "Jackie Style." She supplied them with suggestions, swatches and her own sketches, and made her penchants clear: "I like terribly simple, covered up clothes," she wrote to Vreeland, and she required that her clothes skim rather than contour her figure to allow her to move with ease. On the bitter cold morning of Inauguration Day, Mrs. Kennedy stood next to her husband on the podium in a greige wool coat designed by Oleg Cassini and a plain pillbox hat made for her by Halston. Her simple ensemble marked a bold contrast to the dark furs and elaborate garments worn by the other women in attendance and represented a new image for America—fresh, clean and looking forward to a new phase of national endeavor.

Mrs. Kennedy played an active role in creating her public image. She disliked wearing hats, which covered her face and flattened her hair, but respected prevailing traditions. So she chose a simple, domed pillbox, whimsical yet decorous, that she tipped back over the crown of her head. Her White House wardrobe featured a distinctive set of style lines—the A-line silhouette, the boat neck, the collarless jacket and the sleeveless bodice—that cast a consistent image of her own personality as practical, elegant and demure.

Throughout her years in the White House, Mrs. Kennedy used the nuance of style in what she called the "State Wardrobe" to give meaning to every event. She dressed with absolute simplicity for formal dinners and receptions, relying upon the exquisite cut and drape of her gowns—rather than ostentatious jewels—to mark the occasion. In France, she wore French designs, recalling the American founders' respect for French culture. As part of her attentive preparation for her "Goodwill Tours," along with studying history and culture, she selected garments that expressed an aesthetic response to her host nation, such as the "sun color" garments made for Mexico and the brilliant silk dresses worn in India. Richard Martin, late curator of the Metropolitan Museum's Costume Institute, characterized Mrs. Kennedy's style as "a way of living, not simply adorning herself but expressing her vision of beauty in the world." And even today, nearly a half-century later, the meaning of "Jackie Look" endures as fresh, contemporary and unmistakably American as the woman who gave it her name. **ITF**

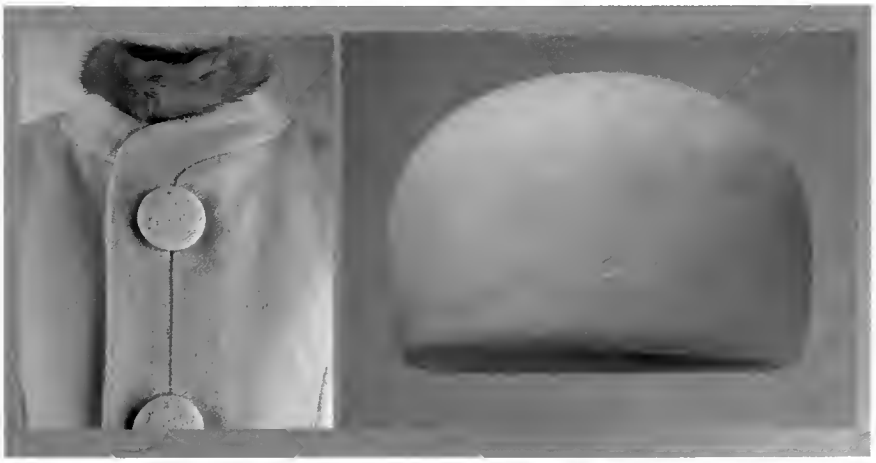
Debra Mancoff will be speaking at the member previews on Nov. 8, 9, 10, 14 and 28. See the calendar for other programs, or visit www.fieldmuseum.org/jkennedy. Also stop by the specialty store to purchase the beautiful companion catalog.

This exhibition was organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

Left: Jacqueline Kennedy and Lee Radziwill on Lake Pichola, India, March 17, 1962.

Right: White House Nobel Laureate dinner, April 29, 1962.



Coat by Oleg Cassini in greige wool melton with sable muff, 1961. Pillbox hat by Bergdorf Goodman in beige felt, 1961.

Bolivian Communities Working Toward Conservation

Dmitry Tsim, Writer

An excited man gestures wildly as he imitates a rodent trying to break open a nut and swings from side to side as if carrying a heavy load. The man is from Bolpebra, a small community in the extreme northwest corner of Bolivia, deep in the heart of the Amazon. Seamlessly intertwining Spanish and Portuguese, he tells Anne Umali, an international programs coordinator for The Field Museum's Environmental and Conservation Programs Department (ECP), the story of the *jochi*, or agouti, a common rodent legendary for its ingenuity in cracking open the castaña, or Brazil nut (*Bertholletia excelsa*). Like the squirrel, the *jochi* hoards nuts in its mouth and paws, burying them where other animals cannot access them.

The abundant myths surrounding the *jochi* underscore the important relationship between the rodent, the Brazil nut, the local population and the environment. The *jochi* is the only known seed disperser of Brazil nuts, its jaws strong enough to break the shell. Luckily, the *jochi* often forgets where it buried the nuts. New trees sprout from its secret treasure, providing the farmers with their main source of income, harvesting Brazil nuts.

VICTOR HUGO GARCIA

Anne Umali, standing at right, leads a discussion on Amazon forests.

Science in action

The *jochi* story is just one of many that Umali and her ECP colleagues have learned through their community outreach efforts in the state of Pando, Bolivia, where ECP works as part of an international team that includes scientists, teachers and students from the Universidad Amazónica de Pando, and the Centro de Investigación y Preservación de la Amazonía. The team, based in Pando's capital of Cobija, is creating an array of programs that address how we can all act together—from the university biologist to the Bolpebra farmer—to preserve this area of high biological diversity.

Since 1999, ECP has conducted rapid biological inventories of Pando's plant and animal species in three different areas and established that this area has some of the highest biodiversity in Bolivia. However, surveys alone do not ensure the species' lasting protection. Alliances must be made from the community level to the highest ranks of government, and extensive education and technical support must be provided to translate science into conservation action.

Starting in 2001, Field Museum and Bolivian researchers mapped out the strengths, or social assets, of 29 communities in western Pando to understand how best to engage them in conserving their lands. The results are still being tabulated, but recommendations will eventually be made to the government to establish municipal conservation areas that local communities can manage. This lofty plan will require training the communities in how to oversee their own protected lands in a sustainable manner, and will eventually be replicated throughout Pando.

New approach to outdated practices

The people of Pando want to safeguard this beautiful area, yet are wary of researchers and officials who quickly survey the area and leave with empty promises of economic development. Shattering the

image of the distant observer, ECP has a number of initiatives that reach out to the communities themselves and to the university teachers and students in Cobija who will eventually work with the communities to develop sustainable forestry.

In one initiative, ECP is creating visually dynamic educational materials on such topics as agroforestry systems, which are diverse, productive landscapes, and how to implement and monitor conservation plans. These simple and direct visual aids often serve as the center point for active discussions, a more appropriate method for rural audiences than a high-tech video or the Internet. In another project, ECP is developing a book, *Descubre Tu Bosque de Pando (Discover your Pando Forest),* that contains colorful illustrations, games and puzzles in a comic-like format. The communities of northern Bolivia provided input on the book.

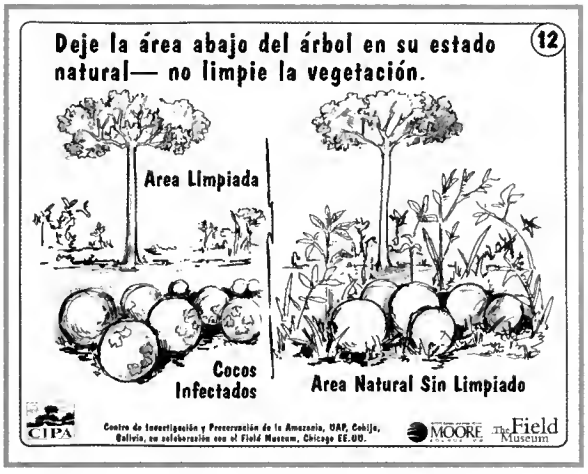
Each outreach effort is part of a long, multi-layered process called capacity building: increasing the ability of diverse local people and institutions to develop and implement their own conservation programs. For example, preparing the university teachers and students involves getting donations of used computers, offering technical assistance and providing courses in how to communicate about conservation. The people of Pando know the land, and the students are learning the science. ECP helps them organize and present the information in useful ways.

Since community work has only recently begun, ECP is addressing such challenges as arduous travel along unpaved roads, adjusting to the farmers' unpredictable schedules and communicating in areas without electricity. Yet despite the difficulties, ECP's efforts continue to expand. For example, the U.S. embassy in Bolivia has asked the Museum to help develop a small traveling exhibition about sustainable forest products and harvesting rubber and *castañas.*

Bolpebra families gathered in the small school to welcome Umali's team. They shared stories of the *jochi,* lamented over the lack of educational resources and expressed great interest in *Descubre Tu Bosque de Pando.* Together they solved a puzzle, guiding the *jochi* through hunters, fires and deforested wasteland toward its much-desired *castaña* tree. In some ways, the relationship between the *jochi* and the Bolpebra families reflects the relationship between the people of Pando and ECP, each working together to ensure that the Pando way of life, and the lands they inhabit, will thrive. **TF**

ANNE UMALI

Castañas, *or Brazil nuts, the main source of income for many Pando communities.*



DAN BRINKMEIER

An illustration from a technical manual about preventing mold from damaging a Brazil nut harvest.

Something Important is Happening

Five students from the Universidad Amazónica de Pando visited The Field Museum last year to train in collections management and education. Their experience helped spark 30 students to enroll in the university's biology program, following two years without a single new registrant. Students know "something important is happening," according to faculty, as word has traveled about the Museum's efforts to involve them in our research, education and outreach initiatives throughout Pando.

With this renewed interest, the university reopened its natural history museum and has since welcomed more than 2,000 visitors, including school groups from across the river in Brazil. In addition, several Field Museum zoologists have led short courses at the university on such topics as taxonomy, biodiversity and how to collect and prepare Amazonian fishes.

"We are fortunate to have such strong resources in the States," said Phil Willink, a Field Museum ichthyologist who taught one of the workshops. "The Pando students are hungry for information and support, and it was a great opportunity to visit with them." Other Field Museum staff members may go to Pando this year to lead additional trainings on exhibition production and taxidermy.

Field Museum ichthyologist Phil Willink teaches university students in Cobija, a collections management.

Tapestry Restoration the Experience of a Lifetime

Amy E. Cranch, Editor

It was a 23 by 13 feet dream job for a textile conservator.

An enormous silk tapestry made for the World's Columbian Exposition of 1893, and since then part of The Field Museum's anthropology collections, was restored this past spring. The hand-stitched masterwork is the signature piece in an exhibition traveling to Osaka, Tokyo and Nagoya on Japanese objects commissioned for three 19th-century expositions. Designed by Jinbe Kawashima of Japan's oldest and most famous manufacturer of decorative fabrics, the tapestry depicts more than 1,500 men—each one's facial features, costumes and gestures distinctly different—participating in a religious festival at the temple of Nikkō. Phoenixes, chrysanthemum blooms and other plants intricately frame the lavish scene.

JOHN WEINSTEIN/GN90689 21D

Katherine Ridgway mends a massive Japanese tapestry made for the World's Columbian Exposition of 1893.

The weavers used a precise and demanding technique in which they filed their fingernails into a saw-toothed pattern to press the fine silk threads into place. Despite the tapestry's unmatched craftsmanship, time and human activity, such as displaying it without protection for 17 years, had caused fraying, stretching and tears and holes. Once the Japanese exhibition developers chose the tapestry, the Museum's conservation team had less than four months to plan and execute its complex treatment.

Katherine Ridgway, the team's manager, listed some logistical challenges they had to work through: "What room is big enough to accommodate this large tapestry? Who can we release from other projects to focus on this? How do we position the tapestry so that all areas can be reached? How do we mend it without creating more harm? It was quite overwhelming!"

To prepare the team, chief conservator Ruth Norton led a course on repairing holes using several stitching techniques. "The type of stitch and the size and color of thread are critical to making a mend that will support the original tapestry threads and visually blend in," said Norton.

The first challenge was unrolling the tapestry one section at a time so that the façade faced outward and the center, suspended between tables, could be accessed from above and below. Meticulous attention was paid to matching the mending thread to the original color. Each section had to be completely stabilized before the rolls were unclamped and the tapestry was rotated to the next section.

"Stitching down gold thread was the most difficult part," said conservator Carolyn Powell. "It is hard to see and even harder to repair since the thread used for mending it is about as thick as a strand of human hair and very slippery."

Once all the mending was completed, the team unrolled the entire tapestry onto a plastic-covered floor with the reverse side up to attach strips of lining that could be hung on a pole and bear the weight of suspension. Long basting stitches temporarily held the strips in place, and since this required some walking on the tapestry, protective sheets were laid over the tapestry to distribute weight and prevent the weave from stretching. Then the tapestry was rolled again with the façade facing outward, and each lining piece was secured with 11 rows of thread in the appropriate color.

Nearly everyone in the conservation department worked on the tapestry at some point, even members of an employee/volunteer handiwork club. Tatsumi Brown, a volunteer who donated more than 200 hours to the project, said, "I couldn't have imagined a more rewarding volunteer opportunity than working with professional conservators on a gorgeous tapestry."

In the end, repairing this one artifact took roughly 500 hours and a dozen people. Everyone agreed that since this is the Museum's only large Japanese tapestry, conserving it was an experience they will likely never repeat at the Museum again. ITF

YOUR GUIDE TO THE FIELD

Calendar of Events for Fall 2004

An Evening with Isabel Allende

Join world-renowned author Isabel Allende as she recounts a life of love, writing and years spent in politically unstable South America. Allende's childhood—following her stepfather's diplomatic career through Chile, Bolivia, Europe and the Middle East—exposed her to a range of cultures and politics that shaped her extraordinary imagination. She'll share memorable personal experiences, reflecting on family relationships and the larger societal and political forces that shape our lives. She has written numerous bestsellers, including *The House of the Spirits*, which was made into a major motion picture.

Monday, Oct. 25, 7pm
Reserved seats: $24, members $22
General admission: $20, members $18, students/educators $15 (limited supply

COURTESY OF DAVID LAVIN AGENCY

JACQUELINE KENNEDY: THE WHITE HOUSE YEARS

Selections from the JOHN F. KENNEDY LIBRARY AND MUSEUM

©JFK LIBRARY AND MUSEUM

November 13, 2004–May 8, 2005

Revisit an era of style and grace to explore how Jacqueline Kennedy's taste, intelligence and charisma influenced American statesmanship and diplomacy. More than 70 garments, along with photographs, documents and film clips, reveal how the former first lady carefully shaped her image to reflect the vigor, ideals and internationalism of her husband's administration.

An Afternoon with Robert Dallek

Acclaimed historian and author Robert Dallek will examine critical issues rich in relevance to our current domestic and international crises. Dallek's landmark biography of President Kennedy, *An Unfinished Life: John F. Kennedy 1917–1963*, tells the dramatic story of his life and times, creating a vivid portrait of a bold, brave, human Kennedy, once again a hero.

Saturday, Nov. 13, 2pm
Reserved seats: $28, members $26
General admission: $24, members $22, students/educators $15 (limited supply)

This exhibition has been organized by The John F. Kennedy Library and Museum and The Metropolitan Museum of Art.

This exhibition is made possible through the generous support of The Grainger Foundation and Marshall Field's.

The Field Museum

General Museum Information: 312.922.9410
Family and Adult Program Tickets and Information: 312.665.7400

Please note: Refunds will be issued by Field Museum staff, minus a $10 processing fee for group and family overnights only. No refunds or exchanges are permitted for any other programs. Fees for programs cancelled by The Field Museum will be refunded in full.

Explore the fascinating history of Machu Picchu.

Machu Picchu: Unveiling the Mystery of the Incas was organized by the Yale Peabody Museum of Natural History.

Presented by SAP.

The exhibition is made possible by support from the National Endowment for the Humanities, the National Science Foundation, the Connecticut Humanities Council, Yale University, and the Heritage Mark Foundation.

Family Programs

Performance

Machu Picchu

Hear the enchanting music of Peru! Come listen to the band Machu Picchu perform traditional Peruvian music, and learn how the environment has shaped the beautiful and vibrant sounds of this South American country.

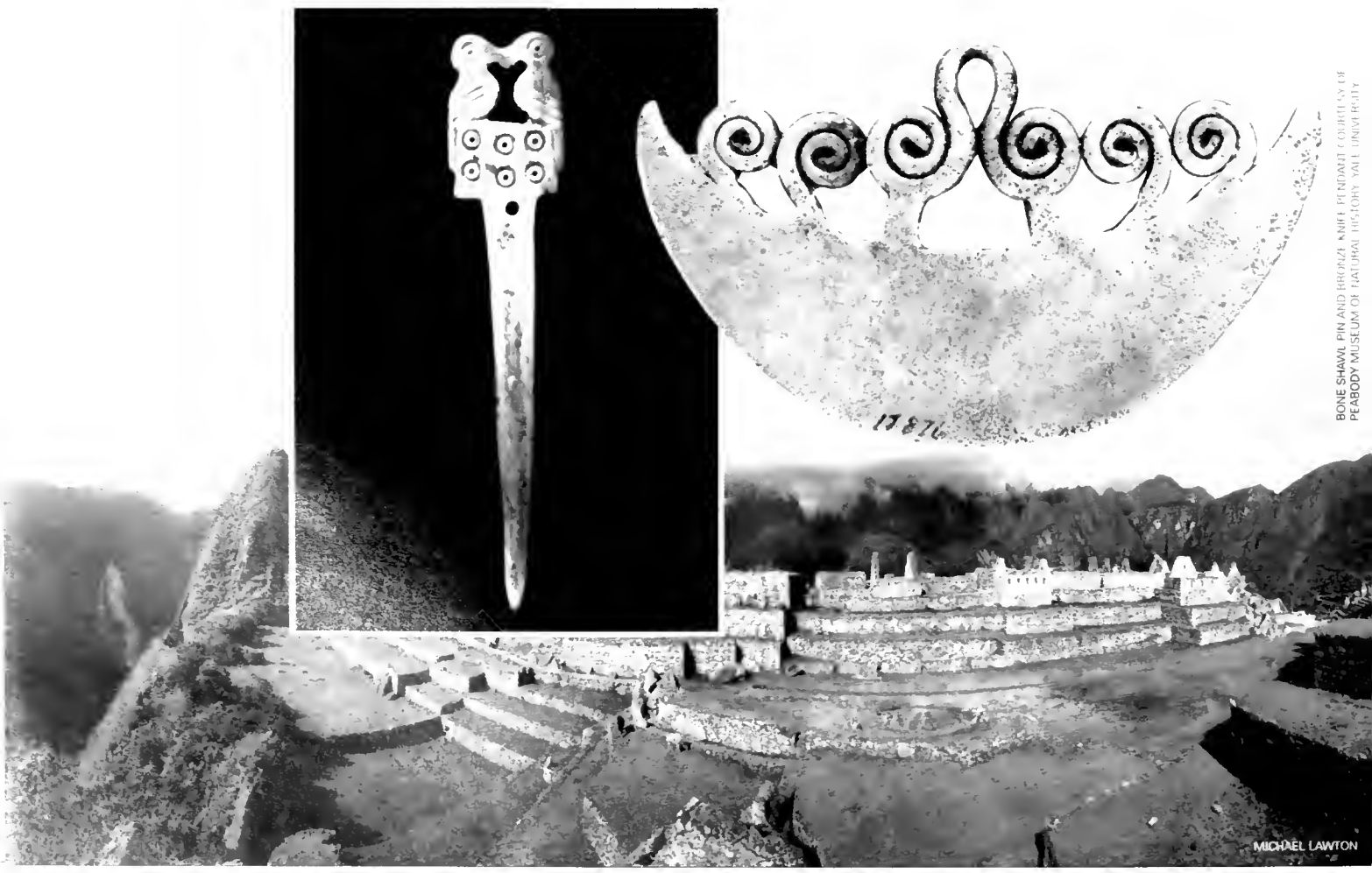
Saturday, Oct. 16, 12:30pm
Free with Museum admission

Workshop

Traditions of the Incas

This fascinating workshop series explores the daily life of the Incas. Make your own knotted *quipu*, learn about the ancient use of archaeoastronomy, examine Incan mummification practices, and discover the enchanting mythology and craftsmanship of Inca culture.

Families with children ages 6–12
Saturdays, Oct. 30–Nov. 20, 10–11:30am
Each workshop: $15, members $12
Workshop series (four classes): $45, members $36



BONE SHAWL PIN AND BRONZE KNIFE PENDANT COURTESY OF PEABODY MUSEUM OF NATURAL HISTORY, YALE UNIVERSITY

MICHAEL LAWTON

Adult Programs

Course

People of the Andes

Robin Coleman, Northwestern University

Examine the sacred traditions that have shaped—and continue to shape—the lives of the Andean people. You'll discover the cities, culture and fascinating rituals of the Inca Empire within a historical context.

Tuesdays, Oct. 19–Nov. 9, 6:30-8:30pm
$70, members $60

Lectures

Lecture Series: Andean Civilizations

Presenters include Jonathan Haas, Donna Nash and Patrick Ryan Williams, TFM Anthropology Dept.

Check www.fieldmuseum.org for a complete list of presenters.

Interested in learning more about this remarkable ancient culture? Meet Field Museum experts and their colleagues who are studying the long, complex history of Andean civilization. Each week will feature a different scientist who is dissecting important cultural elements of different time periods in the dynamic history of this South American people.

Fridays, Oct. 8–Dec. 3, 2pm
Free with Museum admission

An Evening with the Curators

Dr. Richard L. Burger and Dr. Lucy Salazar, Yale Peabody Museum

Get a rare glimpse of the ancient global wonder Machu Picchu through the eyes of the exhibition developers. Learn about the research and commitment behind this magnificent exhibition, and enjoy an exhibition walk-through prior to the public opening.

Thursday, Oct. 14, 6pm
$16, students/educators $14, members $12

Excavating the Andes

Dr. Maria Cecelia Lozada, University of Chicago

Discover Dr. Lozada's unique research in bioarchaeology in the history-rich sites of the Andes, and the invaluable insights it provides on pre-Columbian Andean lifestyles.

Thursday, Nov. 20, 1:30pm
$16, students/educators $14, members $12

COURTESY OF DR. MARIA CECILIA LOZADA

MARK WIDHALM

MICHAEL LAWTON

The Field Museum Research Seminar Series

Discover exciting new research from The Field Museum's anthropology, biodiversity, botany, conservation, geology and zoology departments. These free seminars feature Field Museum scientists and invited speakers, and encompass cross-disciplinary and detailed research topics. Join us each Wednesday at noon to learn more about what our scientists and their colleagues are investigating! Free with Museum admission.

Check www.fieldmuseum.org for a complete lecture schedule.

CATHRYN C. SCOTT/GN90590.9C

Family Workshops

COURTESY STREET LEVEL YOUTH MEDIA

Bring Yourself Up To Street-Level: An Immersive Workshop in Video Storytelling

Learn the art of video storytelling, and take your cues from the pros! Experts from Street-Level Youth Media will guide you through an exploration of the *Urban Expressions* exhibition, and then help you write and tape your own short narrative.

Families with children ages 8–16
Saturday, Sept. 25, 10–11:30am (for 8- to 12-year-olds), 1–2:30pm (for 13- to 16-year-olds)
$15, members $12

Lectures

NATIONAL GEOGRAPHIC LIVE!

© CAROL BECKWITH/ANGELA FISHER

Faces of Africa

Carol Beckwith and Angela Fisher, Authors

Join these renowned photographers and writers on a voyage through the circle of African life as they celebrate the release of their new book, *Faces of Africa*, a follow up to their visual masterpiece *African Ceremonies*. You'll get a rare glimpse into their personal perspectives of 30 years of work on the African continent—a journey that has taken them more than 270,000 miles on foot, camelback, mule train, dugout canoe and four-wheel-drive vehicle to Africa's remotest corners.

Thursday, Sept. 23, 7:30pm
Reserved seats: $30, members $28
General admission: $24, members $22, students/educators $15 (limited supply)

Below is a calendar of current and upcoming temporary exhibitions. Some dates may change. Visit our website at www.fieldmuseum.org or call 312.922.9410 as the date of your visit nears.

Machu Picchu: Unveiling the Mystery of the Incas
October 15, 2004–February 13, 2005

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum
November 13, 2004–May 8, 2005

Family Overnight

Dozin' with the Dinos

Sue the T. rex is having a sleepover! Join us for a night of family workshops, tours and performances. Explore ancient Egypt by flashlight, prowl an African savannah with man-eating lions and take a stroll through the Royal Palace in Bamun, Africa. Then spread your sleeping bag amid some of our most popular exhibitions. The event includes an evening snack and a light breakfast in the morning.

Families with children ages 6–12
5:45pm on Saturday, Nov. 27
until 9am on Sunday, Nov. 28
$47, members $40

CATHRYN C. SCOTT/GN90451.15C

Cultural Connection

Narratives: Doorways to Our Communities

Narratives—such as murals, dance and storytelling—educate, entertain and help shape and maintain a community's rules and values. They often depict social and historical topics or examine the human condition. Throughout the 2004–2005 program year, visit the city's diverse cultural museums for different perspectives on how we tell stories. The kickoff event at The Field Museum will feature live performances and ethnic foods.

Kickoff on Tuesday, Sept. 21, 6–8:30pm
Register through 312.665.7474

Adult Course

Ancient Egypt: Hieroglyphs and History

Tom Mudloff, Egyptologist

Unlock the secrets of the past as you develop a basic knowledge of the remarkable language of ancient Egypt. You'll study the hieroglyphic language and explore actual hieroglyphic records of historic events. Beginners welcome, but be prepared to do some homework! Class limited to 20 people.

Wednesdays, Sept. 29–
Nov. 3, 6–8:30pm
$85, members $72

JUSTIN GRUBICH

Fieldtrip

The Great Hawk Migration

Alan Anderson, Audubon Society

Investigate the migration of diurnal hawks at Illinois Beach State Park—one of Illinois' top hawk-watching sites. Observe how experts watch and record the migrations of such hawks as buteos, falcons, accipiters and more. You'll also visit Middlefork Savanna Forest Preserve, an excellent spot for viewing ducks, shorebirds and grassland birds.

Saturday, Oct. 16, 8:30am–3pm
$60, members $50

JEFF SUNDBERG

Splendors of China's Forbidden City:
The Glorious Reign of Emperor Qianlong
Through September 12

Night Visions: The Secret Designs of Moths
Through January 9, 2005

nposium

A Dream Deferred: Remembering Haiti's Revolution, Exploring Its Future

Dr. Lisa Brock, Columbia College; Dr. Jasmine Pierre, UIC; Michelle Agnis, Photographer; and Michael Bracey, Photographer

Explore the dramatic history of the Haitian Revolution. Along w th the Harold Washington Cultural Arts Center, the Museum will commemorate the bicentennial anniversary of Haiti's independence with a slate of lectures, performances and screenings. The afternoon will bring Haitian writers and scholars together to discuss work by and about them, as well as the economic and social factors that shape life in Haiti.

Saturday, Oct. 23, 11:30am–4pm
$16, members $14, students/educators $12
Check www.fieldmuseum.org for a complete program schedule.

©ROBERT HOFFMAN

An Evening with Ladysmith Black Mambazo

This legendary band has inspired people throughout the world with its captivating harmonies and interpretations of traditional South African culture. The event celebrates 10 years of South African democracy, and proceeds go toward Shared Interest, a not-for-profit social investment fund that catalyzes social and economic change in South Africa. Join the pre-concert reception to learn about this valuable organization.

Tuesday, Oct. 19
Reception 6:30pm, concert 7:30pm
Concert only: $50 in advance (312.665.7400), or $60 at the door
Reception and concert: $150. Tickets available through info@sharedinterest.org.

Between Past and Future: New Photography and Video from China

At the Museum of Contemporary Art and the Smart Museum

Don't miss this major exhibition featuring contemporary photogr phy and video from China. Ambitious in scale and experimental i nature, the work included in this groundbrea ing project offers a range of highly individual responses to the unprece- dented changes in China's economi social and cultural life in the pas decade.

©HUANG YAN

Oct. 2, 2004–Jan. 16, 2005

This exhibition is co-organized and circulated the David and Alfred Smart Museum of Art, University of Chicago, and the International Center of Photography, New York, in collabor tion with the Asia Society, New York, and the Museum of Contemporary Art, Chicago.

Expressions: Young Voices, New Technologies
Through May 17, 2005

Treasures of the Americas: Selections From the Anthropology Collections of The Field Museum
Through May 30, 2005

pecial Programs to Enhance our Exhibition Experience

Jacqueline Kennedy: The White House Years—Selections from the John F. Kennedy Library and Museum

Screening of film *PT 109*

Check out this suspenseful, fact-based 1963 drama about the youthful John F. Kennedy and his wartime experiences, including the sinking of the PT boat he was captaining.

Second Saturday and Sunday of every month from Dec. 11–May 8 1:30pm (Running time: 2 hrs. 20 min.) Free with Museum admission

ROBERT KNUDSEN ©JFK LIBRARY AND MUSEUM

Lecture

Defining Style: Jacqueline Kennedy's White House Years

Hamish Bowles, European Editor-at-Large of Vogue

Investigate Mrs. Kennedy's enthralling approach to style. Bowles, a guest curator of the exhibition, will explore how the first lady carefully shaped her image to convey her primary interests and concerns. Learn how her style extended beyond her wardrobe as she used her passion for the arts and history to elevate American culture.

Wednesday, Dec. 1, 7pm
Reserved seats: $ 24, members $22
General admission: $20, members $18, students/educators $15 (limited quantity)

New Hall of Dinosaurs

Behind the Scenes

Discovering the New Dinosaur Hall

Richard Kissel and Todd J. Tubutis, TFM Exhibitions Dept.

Where have all the dinosaurs gone? Witness the evolution of our new exhibition, opening in 2006, that will tell the history of life on Earth. Designers and content specialists will give you a behind-the-scenes look at models, drawings and designs.

For families with children ages 6–12: Friday, Oct. 22, 6–8pm
Adults: Saturday, Oct. 23, 10am–noon
$15, members $12

e renovation of Life Over Time is made possible, in part, with support from the Illinois partment of Commerce and Economic Opportunity, the U.S. Department of Housing and n Development, the U.S. Department of Energy and the U.S. Department of Education.

CONCEPT RENDERING BY ERIC MANABAT

Night Visions: The Secret Designs of Moths

Behind the Scenes

oths and Butterflies

ook closely at the enchanting diversity found in moths. cipher the differences between moths and butterflies with expert on Lepidoptera, the order in which these vibrant ects are found.

families with children ages 6-12: Friday, Nov. 5, 6–8pm
lults: Saturday, Nov. 6, 10am–noon
5, members $12

Witness luminous creatures and stunning artifacts.

Night Visions: The Secret Designs of Moths

©JOSEPH SCHEER

Through January 9, 2005

Discover the surprising beauty of these night creatures through stunning, larger-than-life images that reveal secrets rarely visible to the naked eye.

This exhibition was developed by The Field Museum in collaboration with Joseph Scheer.

Grand Reopening: Pawnee Earth Lodge

Opens Sept. 7, 2004, in its new location in the Native American exhibition halls

Explore this full-scale reconstruction of a traditional Pawnee dwelling. The new lodge will examine the history of the Pawnee people and explore issues that 21st-century Native Americans face.

Urban Expressions: Young Voices, New Technologies

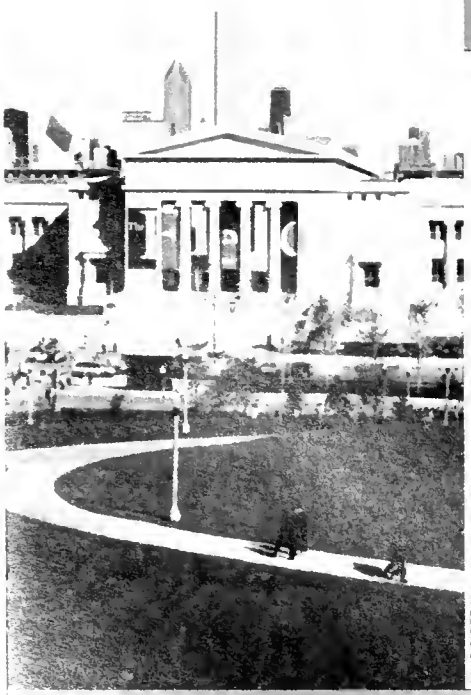
Through January 17, 2005

See and hear first-hand accounts of young Chicagoans reflecting on urban life.

This exhibition was developed by Street-Level Youth Media in collaboration with The Field Museum.

PHOTO COURTESY OF STREET-LEVEL YOUTH MEDIA

Visitor Information



MIKE SIGNER

Getting Here: Soldier Field's parking garage is open across the street from our main entrance. Visit www.fieldmuseum.org for the latest information on new parking lots/rates, free trolleys and public transit.

Hours: 9am–5pm daily. Last admission at 4pm.

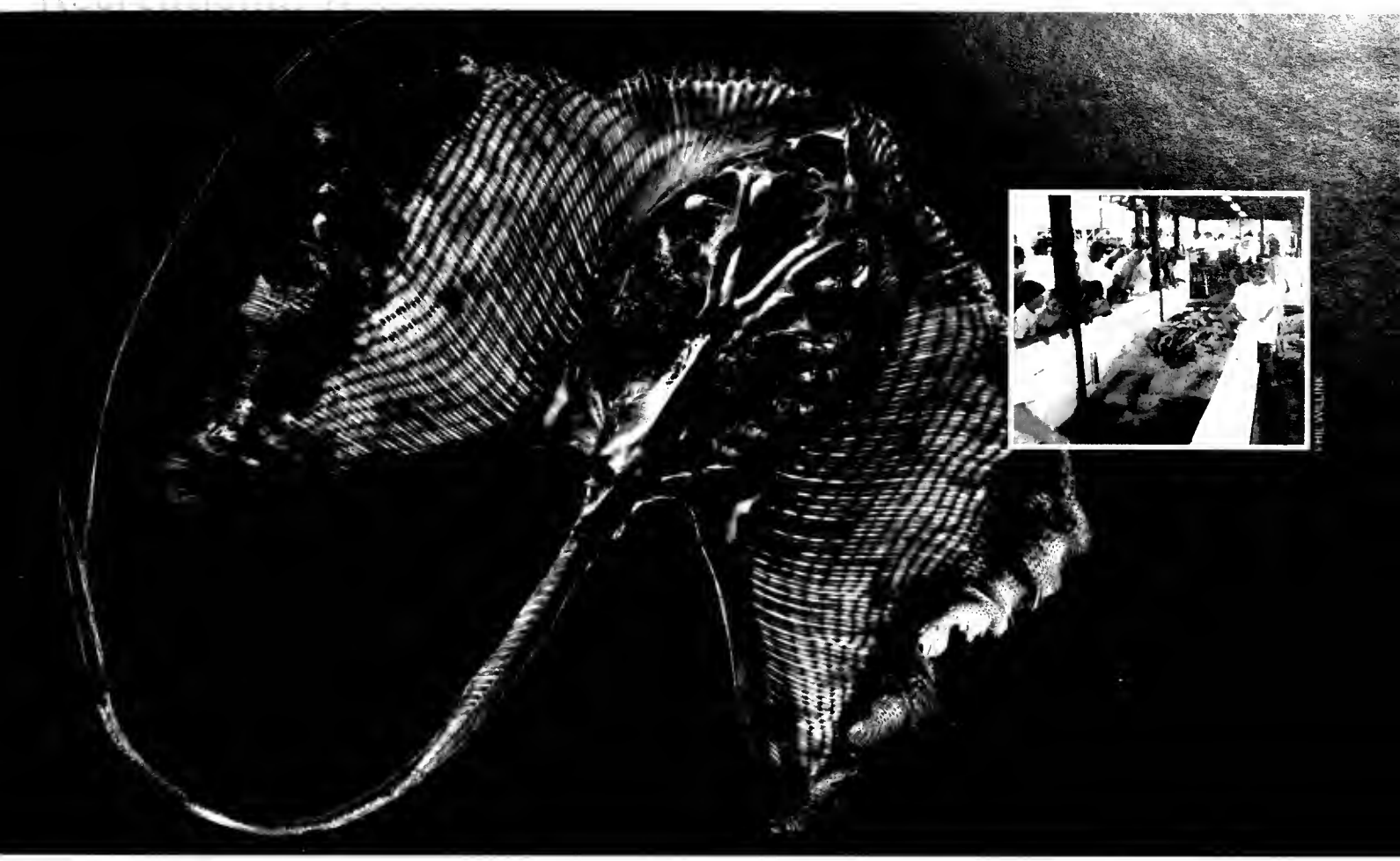
Admission and Tickets: Member passes can be reserved through the membership department (312.665.7705) or picked up at the membership services desk. For non-members, The Field Museum's new gold pass, which includes general admission plus one special exhibition, ranges in price from $7 to $17, depending on your age category and whether you are a Chicago resident. Please bring your ID to receive the appropriate ticket price.

Tickets are available at the Museum's admission desks, or in advance via www.fieldmuseum.org or 866.FIELD.03. For all admission and ticket details, visit www.fieldmuseum.org.

Accessibility: Visitors using wheelchairs or strollers may be dropped off at the west entrance. Handicapped parking and wheelchairs are available on a first-come, first-served basis. Call 312.665.7400 to check on the accessibility of programs that take place outside of the Museum.

Information: 312.922.9410 or www.fieldmuseum.org

...ludes the people of Chicago for their long-standing, generous support of the Museum through the Chicago Park District. In addition, Museum programs are partially supported by a CityArts ...m the City of Chicago Department of Cultural Affairs and the Illinois Arts Council, a state agency.



MARK WIDHALM/Z94408.02D

A stingray from the rodeo that's now part of the Museum collections (left); rodeo spectators (inset).

It's a fish-eat-fish world. Each year about 3,200 tenacious anglers and 100,000 spectators descend upon Dauphin Island for the Alabama Deep Sea Fishing Rodeo. Participants compete for the biggest catch in more than 30 categories, including king mackerel, tarpon, shark and "most unusual."

"The fishermen aren't interested in keeping what they can't eat," said Phil Willink, PhD, a collections manager in The Field Museum's fish division. That's good news for scientific opportunists. No occasions exist beyond this rodeo in which researchers can obtain such numbers and diversity of fishes from the Gulf of Mexico.

Dr. Willink and Eric Hilton, PhD, a post-doctoral research scientist who studies the skeletons of live and fossil fishes, attended the tournament to replenish the Museum's Gulf collections, last updated in the 1950s, and gather specimens for research and education programs and events. Making the Dauphin Island Sea Lab their home, they prepared enough remarkable finds to fill five barrels. Dr. Willink's prize discovery was an inch-long stingray spine lodged in the upper lip of a 343-pound bull shark.

Coincidentally, Dr. Willink is part of a cross-disciplinary team studying the use of stingray spines in Maya bloodletting rituals. Stingray toxins can cause tissue necrosis, even death. Since the Maya likely knew the dangers, the team's research, co-authored by Helen Haines, PhD, of the Museum's anthropology department, hypothesizes that the spines were used specifically in severe or intense rituals. In other words, the more grave the situation necessitating the ritual, such as political instability, the greater the devotion, and hence the risks, to attract the gods. Further research is in the works.

Forest Tales of a Brazilian Graduate Student

Ana Carolina Carnaval, PhD Candidate, Department of Zoology

I couldn't avoid laughing when my guide screamed after his flashlight illuminated the foot-long female Labyrinth frog I had been searching for since dusk. After all, Severino had been specially designated to protect me during my nightly herpetological expeditions in northeastern Brazil.

ANA CAROLINA CARNAVAL

Hylomantis granulosa

ANA CAROLINA CARNAVAL

Proceratophrys boiei

I had arrived at that sugarcane plantation a few days earlier. Dr. José Guilherme, the landlord, skeptically asked what a young *carioca* like me (a native of Rio de Janeiro) was doing in such a remote area of Brazil. I explained that I was pursuing a doctorate degree from the University of Chicago Committee on Evolutionary Biology and The Field Museum, and was searching for field sites in the 5,000-acre forest fragment that still remained amid his sugarcane fields. Amused with my unusual request to set up camp and catch frogs at night, Dr. Guilherme arranged for a pick-up truck to take me and two other Brazilian biologists to a nearby forest site. He also told me to find a local sugarcane worker to help as a bodyguard and guide. That's how I met Severino, a kind, quiet plantation employee who was wise enough to ensure my safety but, as I found out, absolutely terrified of frogs!

Forest fragmentation, frogs and DNA

Severino's story is just one unforgettable memory I have from my research experiences. Since 1999, under the orientation of Field Museum associate curator and chairman of the zoology department, John Bates, PhD, I have been studying frogs from northeastern Brazil's endangered Atlantic rainforest. Strongly affected by environmental changes, amphibians are important models for ecological and evolutionary studies and invaluable indicators of ecosystem health. Additionally, some amphibian populations are declining worldwide, motivating further studies of this group. Working in the Neotropics reflects not only my background, but also a desire to generate new information about this hugely diverse, yet poorly known region.

The Atlantic rainforest lies along the coast of Brazil. Home to nearly 22,000 species of plants and tetrapods (four-legged animals)—9,000 of which occur nowhere else on the planet—it ranks among the world's top priority areas for conservation. Sadly, human activities such as logging and road building have severely fragmented the area, and today's remnants barely add up to 8 percent of its original extent. Approximately 350 species of frogs and toads inhabit this biodiversity hotspot, roughly 300 of which are endemic to the region.

One of my main goals is to assess the effects of long- and short-term habitat fragmentation on the genetic structure of Brazilian amphibians. I collect two species of frogs in both human-made forest fragments that are less than 500 years old, and in older, naturally isolated forests within a semi-arid

region known as the *Caatinga*. I harvest a small amount of tissue for biochemical analyses from each of the 10 to 20 individual frogs I gather per site. The tissue samples can be taken from either the liver, which is removed after the animal is anesthetized and sacrificed, or from the tip of a toe, after which the frog is immediately released back into its natural habitat. Toe-clipping works well because small cuts heal rapidly, allowing field biologists to distinctively mark each individual for future identification.

Thanks to permits issued by the Brazilian and US governments, I do all my genetic analyses in The Field Museum's Pritzker Laboratory for Molecular Systematics and Evolution. By comparing DNA sequences of frogs from different forest fragments, I can study how genetically distinct and diverse each population is. For instance, my work on the ground-dweller frog *Proceratophrys boiei* has shown that each of the seven sampled populations in northeastern Brazil is genetically unique. Some of these frog populations have been isolated from each other (not exchanging migrants) for thousands of years. Therefore, if conservation efforts were channeled toward protecting only a few populations, we could lose others that are genetically distinct and hence reduce overall diversity in this species.

Another interesting result of my work is that frogs in naturally isolated forests within the *Caatinga* show significantly lower levels of genetic variability compared to those in human-made fragments. These populations have become inbred, which could affect their long-term survival. Their low genetic variability is the result of natural processes that occurred before humans arrived, such as forests retracting in response to climate change.

New friends in the field

An exciting aspect of being a student here is that my field and laboratory work can extend beyond my doctoral thesis. My trips to previously unknown forest sites have yielded new frog species that I am now describing, and I am able to train Brazilian undergraduate and graduate students in field techniques and herpetology. Most rewarding are my experiences of meeting and learning from the simple rural people that live near my sampling sites—people like Severino and his family.

When I first started my fieldwork, the local children were shy and the elder village men couldn't understand why I had left my family to spend months in the forest looking for frogs. In these rural communities, women are often raised to take care of their relatives, husband and children. Today my returns are cheerful, and the children can't wait to help me find tadpoles. With a mix of pride and sadness, one of my field guides just told me he decided to support his daughter's wish to move to the nearest village. "She wants to go to school to become a lawyer," he said, "or a doctor, just like you, Ana." Then he added, "Perhaps one day she will help you save this forest from being logged." I smiled. I know my work alone isn't enough to change the environmental and social scenario of Brazil's rural areas. But it's a start. **ITF**

ANA CAROLINA CARNAVAL

Hyla semilineata

GUILHERME BRANDT PINTO

ALEXANDRE VICENTE

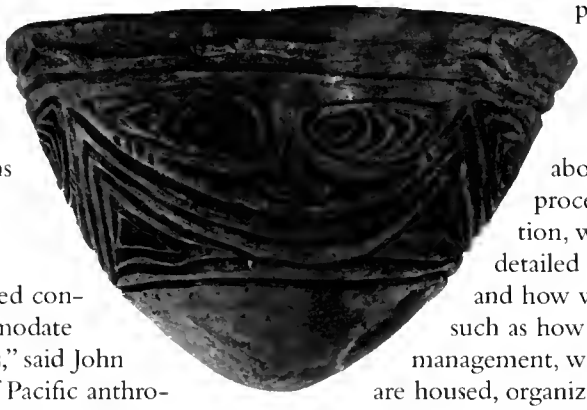
Ana Carnaval with her field assistants in Maranhão (top), and with Jaciel and Toni, local children from Reserva Frei Caneca (bottom).

ANA CAROLINA CARNAVAL

In Full View: New Lab Visible to Public

If you had 1.2 million things in your house, how would you take care of them?

A new 1,600-square-foot facility, the Regenstein Laboratory, is now open in *Traveling the Pacific*. As with the McDonald's Fossil Preparation Laboratory, visitors can observe our anthropology conservators and collections staff working on artifacts from all over the world. The lab also displays objects from the Pacific Islands and explains key tenets of managing anthropology collections.



Regenstein Laboratory conservators will work on such artifacts as this bowl from the north coast of Papua New Guinea.

JOHN WEINSTEIN/A114365.01D

"The Regenstein Laboratory provides needed conservation space to accommodate our expanding collections," said John Edward Terrell, curator of Pacific anthropology. "It also brings work that is normally performed behind the scenes to our guests so they can see the depth of what we do to take care of our treasured collections."

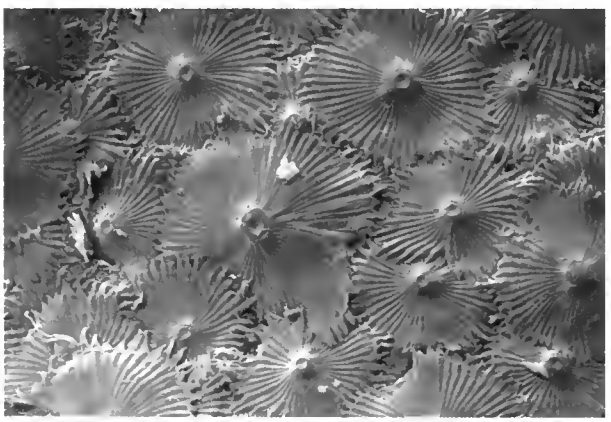
A permanent display case includes such splendid things as a necklace and armband that George Dorsey, one of the Museum's first anthropologists, purchased in 1908 from a South Seas plantation director, and a crocodile-shaped canoe prow that honors the spirit world.

Visitors can also learn about the Museum's four-phase process for collections: registration, which involves recording detailed descriptions of each object and how we obtained it; conservation, such as how we treat damaged items; management, which includes how artifacts are housed, organized and handled; and use. Few people know that The Field Museum exhibits less than 1 percent of its collections. The rest is available for study, or to loan out for research and public exhibitions done elsewhere.

Micro Structures in Macro View

Field Museum scientists are seeing unseen worlds with new laboratory instruments that keep them at the head of research and swiftly changing technology.

An SEM image of the underside of a croton leaf.



Magnifying surfaces 10 to 200,000 times life-size, the new scanning electron microscope (SEM) creates 3-D images that reveal levels of detail and complexity impossible to acquire with conventional light microscopes. It has the largest chamber available for viewing sizeable specimens and objects, such as skeletons or fossil plants, and it can analyze an object's elemental composition by measuring the X-rays that are emitted from the sample. In one project, archaeologists are studying Inca metal objects to determine what alloys the Inca used in different parts of their empire.

Funded in part by the National Science Foundation (NSF), an upcoming elemental analysis facility will house a plasma mass spectrometer that complements the SEM and a geochemistry laboratory used to examine meteorites and terrestrial rocks. With speed, accuracy and minimal destruction, this spectrometer can evaluate more than 30 trace elements at once, often at the level of parts per billion. It etches a micro-thin line with a laser, allowing different components of one ceramic, such as the paste, paints and slip, to be tested individually and compared to other sources.

Another NSF grant has helped purchase an additional automated DNA sequencer, tripling the Pritzker Laboratory's capacity to accommodate the more than 60 Museum and visiting scientists who use it annually in their molecular biology and systematic studies. Former methods were tedious and time-consuming, but automated sequencers are faster and yield longer DNA sequences than previous methods. The sequencer and its attached computer both analyze and store the data, decreasing the likelihood of inaccuracies, and increasing scientists' ability to understand and preserve Earth's tremendous diversity of life from the genetic level up.

Get An Early Jump on Children's Holiday Celebration Tickets

The Field Museum's holiday season begins Thursday, Dec. 2 when The Women's Board hosts its annual Children's Holiday Celebration. Children of Chicago and their families will explore and celebrate the diverse traditions of Chicago and the world through crafts, stories and entertainment at this festive event.

Hear holiday favorites performed by the Stu Hirsh Orchestra, marvel at the gravity-defying Jesse White Tumblers and enjoy the grace of the Ballet Chicago Studio Company. Delicious food, special appearances by such favorite characters as Ronald McDonald and a visit with Santa Claus will create a memorable afternoon.

Reservations are limited and tickets will not be sold at the door. For tickets or further information call 312.665.7145.

The Women's Board thanks Sears, Roebuck and Co. for its generous support of this event.

Donor Groups Support Museum's Science

Kate Porick, Writer

A South African student uses The Field Museum's labs to assemble DNA data on a poorly known group of birds. An anthropology curator leads fervent collectors through rows of ancient pottery. An ethnographer tells stories about working in Chicago's diverse neighborhoods. If you are interested in these activities, or supporting the science behind them, join one of The Field Museum's special interest donor groups.

JOHN BATES

The Council on Africa supports such activities as training Congolese students on how to identify the region's small mammals.

The Council on Africa brings African and Malagasy culture and biology to you, while supporting Field Museum research on the continent and training for its next generation of scientists. Up to 10 African students visit the Museum each year to learn and assemble data for their graduate school applications or dissertations. "They don't have access to the same resources in their homeland," said John Bates, chair of the zoology department. "Their stays here empower them to become better scientists and strengthen the relationship between Africans and Malagasy and the Museum."

Education, housing, health care, the environment and leadership are critical issues faced by communities everywhere. The Center for Cultural Understanding and Change (CCUC) Council brings together CCUC curators and constituents, community activists, government officials and others who value cultural differences. "The world is getting smaller by the moment. This council will help us better understand how we're all connected, and how to appreciate and support cultural diversity," said Laura Washington, a board member and co-chair of the CCUC Council.

Imagine visiting the glittering church of Santo Domingo in Oaxaca, Mexico, attending the opening of the Smithsonian's National Museum of the American Indian or delving into the anthropology department's storerooms. Members of the Cultural Collections Committee (CCC) participate in extraordinary events like these annually. "As an avid collector myself, the CCC teaches me about the objects I love and how to care for them," said Kathleen Rummel, a member of the CCC. "And I can learn about the Museum's exceptional collections, or travel for a private look at other collections."

Other member organizations include the Field Associates, which gathers young professionals to support education initiatives, and the Friends of the Field Museum Library, which raises money to preserve and enrich the library's collections that are central to the Museum's research and education mission. New groups are continuously forming, including one dedicated to the botany department's collections and research.

Wherever your passions lie, join a Field Museum donor group for distinctive opportunities to grow as an individual while contributing financially to science. For more information, call 312.665.7130.

Louis Agassiz Fuertes—A Rare Bird Himself

Sujata Rani Singhal, Writer

"Louis Agassiz Fuertes was an artist, sensitive, ardent, impetuous, full of almost boyish enthusiasm..."

This statement by Wilfred Hudson Osgood, a former curator and chair of The Field Museum's zoology department, sums up the preeminent bird illustrator of the 20th century. Intensely interested in the natural sciences since childhood, Louis Agassiz Fuertes (1874–1927) taught himself the art of illustration by studying John James Audubon's monumental *Birds of America*. He imitated Audubon's meticulous sense of detail and depiction of birds in their natural habitats, eventually surpassing Audubon in his ability to freely illustrate what he observed.

LOUIS AGASSIZ FUERTES

Secretary bird, Sagittarius serpentarius

Fuertes' skills eventually brought requests to join expeditions for the American Museum of Natural History and the National Museum of Natural History (the Smithsonian), among others. His most notable work was done on a Chicago Daily News-Field Museum expedition to Abyssinia (now Ethiopia) in 1926 and 1927. By that time, Fuertes had established a new standard in ornithological illustration. Many people consider the fruits of this expedition—his longest, farthest and last—to be the essence of a career that spanned more than 30 years.

James E. Baum, a wealthy Chicago writer, concocted the trip. He wrote in a letter to Fuertes: "If a man should come to you and ask, 'What is the strangest country in the world today? Where is the bird life the most curious and plentiful?' you would unquestionably answer both by one word—Abyssinia." Baum and Fuertes successfully won the backing of Osgood, Museum president Stanley Field, and the Chicago Daily News. Osgood led the expedition, the first of its kind by a modern museum to Abyssinia.

Unfortunately, Fuertes' luggage never arrived in Abyssinia. Adjusting to borrowed clothing and equipment, he still fervently collected and prepared his specimens during the day, and sketched and painted at night by lantern light with an unfamiliar kit he had purchased in Addis Ababa. His genius rose to the occasion, as he often finished each watercolor within an hour.

"The change Fuertes brought to bird illustration arose from his ability to render what the eye actually sees, not what the mind expects to see or thinks it sees," said Ben Williams, the Museum's head librarian. So acute were his observations and memory that he could accurately paint a scene years after he saw it, yet his impressionistic artistry was never lost in the details.

Osgood hired Fuertes as a collector rather than an artist, which meant that Fuertes owned what he created. In a sad twist of fate, this fact saved Fuertes' family from losing the art when he died shortly after the expedition in a train-automobile accident. C. Suydam Cutting, a wealthy volunteer member of the expedition, purchased 115 Abyssinia paintings and drawings from Fuertes' widow and donated them to The Field Museum. Selections from the collection still grace the walls of the library's Mary W. Runnells Rare Book Room.

The Friends of The Field Museum Library supports the development of its natural history research materials and enjoys special programs on such topics as how to collect and conserve rare books. To join, write library_friends@fieldmuseum.org, or call 312.665.7137.

Private Viewings of Jacqueline Kennedy Exhibition

Annual Fund Preview

Sunday, Nov. 7. For information, visit www.fieldmuseum.org/annualfund, call 312.665.7777 or email annualfund@fieldmuseum.org.

Membership Previews

Monday, Nov. 8 (11am–10pm); Tuesday, Nov. 9 and Wednesday, Nov. 10 (9am–10pm); Sunday, Nov. 14 and Sunday, Nov. 28 (5–10pm).

How to Get Tickets Beyond the Previews

Since we anticipate a high demand for tickets throughout the exhibition's run, we encourage you to reserve advance tickets. The tickets you use for the members-only previews (dates above) will be subtracted from the total number of free passes you may obtain during regular public hours. Family members can receive up to four passes, and senior, student, individual and National Affiliate members get two passes.

For tickets, call 312.665.7705, or stop by the membership services desk while supplies last. For general membership information, call 312.665.7700.

Hotel Packages for Family and Friends

Do you have out-of-town guests interested in seeing *Jacqueline Kennedy: The White House Years*? They'll receive non-timed, non-dated tickets if they stay at one of our wonderful hotel partners below. See the Planning Your Visit section of www.fieldmuseum.org/jkennedy for hotel phone numbers and package details.

Chicago City Centre Holiday Inn
Chicago's Essex Inn
Days Inn Lincoln Park North
The Drake Hotel
Fairfield Inn and Suites
The Fairmont
Four Seasons
Hilton Chicago
Hotel 71
Hotel Burnham
Millennium Knickerbocker
Palmer House Hilton
The Raphael
Ritz Carlton
Swissôtel Chicago
Tremont Hotel
Whitehall Hotel

BACKGROUND: ©MARK SHAW/PHOTO RESEARCHERS

JFK LIBRARY FOUNDATION

New Select Series Offers Ultimate Jacqueline Kennedy Experience

Hear a lecture by an esteemed Kennedy expert, see the exhibition, shop in our specialty store and enjoy a cocktail reception featuring menus inspired by the former first lady's White House events—all in one day! The Field Museum's new Select Series lets you purchase general admission tickets for $110 or reserved seats for $120. Tables of 10 are available. Call the special events department at 312.665.7600.

An Afternoon with Robert Dallek

Acclaimed Historian and Author
Saturday, Nov. 13
Lecture 2–3:30pm, exhibition viewing 4–6pm, reception 5:30–7pm

Defining Style: Jacqueline Kennedy's White House Years

Hamish Bowles,
European Editor-at-large of Vogue
Wednesday, Dec. 1
Exhibition viewing 4–6pm, reception 5:30–7pm, lecture 7–8:30pm

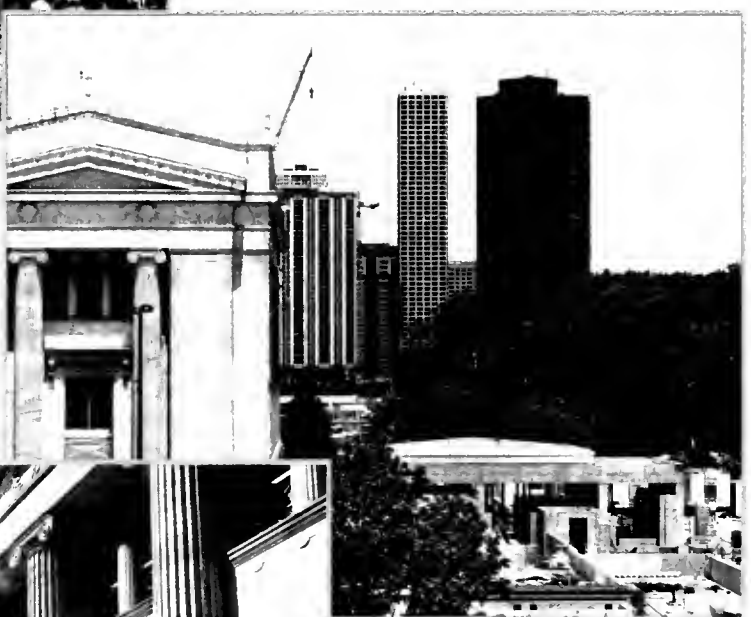
If you're unable to attend a Select Series event, discounted rates are available for groups of 15 or more to see the exhibition only. Call the group sales department at 312.665.7300.

The Field Museum is unlocking more doors to fun and learning.

A new entrance is opening on the Museum's east side this fall. Partly necessitated by reconfigurations to Museum Campus that followed the renovation of Soldier Field, the entrance primarily will serve the 300,000 schoolchildren that annually make a Museum pilgrimage, as well as guests with special needs and strollers. Flowing into the heart of the Museum, the entrance provides a straighter route to key amenities, while also linking visitors more directly to our Museum Campus neighbors.

The new entrance, designed in keeping with the original neo-Classical architecture, was funded in part with a $5 million grant from the Illinois Department of Commerce and Economic Opportunity.

JOHN WEINSTEIN/GN90694.027D



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